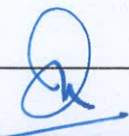


Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
1	Volume-I, Section 1, IFT, Pg. No. 6,	Tender Guidelines	The tender is governed by applicable guidelines for procurement under World Bank Loans, and as per Karnataka Transparency in Public Procurement (KTPP) Guidelines. We request that Tender shall be governed by FIDIC Gold book for DBO contracts (2008 edition) which is usually followed in BWSSB for all DBO tenders. Kindly review and accept.	Not Acceptable, Tender Conditions Prevails
2	Volume-II, Section 7, Part 1 -5	Scope of Works	Please provide Geotechnical investigation & soil analysis report.	At Hulimavu WwTP Pile foundations is required for major structures. For minor structures, soil stabilisation using geotextile for the top 1-1.5m may be considered with 10T/sqm minimum. For piling minimum 450mm dia pile diameter for a minimum 15m length and 60- 75 Ton Axial capacity may be considered. For Anjanapura, UM Kaval and Iblur WwTP the soil shall be strengthened using Geotextile or any other suitable methods for the top 1-1.5m depth if required. Minimum requirements at the site are mentioned in CI 1.6 of part 1 in volume 2, section 7. However, the tenderers are requested to make their individual site visit and bid as per the actual site requirements. Also please refer to cl 1.14 & 1.15 of part 11, volume 2 section 7, Maximum safe bearing capacity and pile capacity of soil strata shall be taken as determined by the Bidder through his own independent investigations. However Tenderer is responsible for the details considered in his design and estimation for Tendering purpose. No claim in this regard will be considered during execution phase
3	Volume-II, Section 7, Part 1 -5	Scope of Works – Existing facilities demolition	Please provide details like Size, GA drawings for existing facilities which are required to be demolished.	At Iblur Site, there are few Structures, which need to be demolished. The tenderers are requested to make individual site visit and ascertain the data required for structures to be demolished and disposed and include the same in their proposal. At Other WwTP sites demolition of structures are not envisaged.
4	Volume-II, Section 7, Part 1 -6	Consent and Approvals	Tender states that “Contractor shall coordinate with KSPCB, BBMP, BESCOM, LDA and any other Departments and obtain all applicable consents certificates necessary for the design, build (construction) and operation & maintenance of the Works as described in the contract.” As BWSSB is the owner of the project, all the consent and approvals shall be obtained by BWSSB. Contractor will assist BWSSB in the process, but ownership shall lie with BWSSB. Also, Contractor can't apply for operational licenses. The same should be deleted from the scope of the bidder. Please review and amend.	Tender Conditions Prevails
5	Volume-II, Section 7, Part 1 -6	Liasoning	Tender states that “Contractor is responsible for liasoning with external agencies like BBMP/BESCOM/Traffic Police etc.” As BWSSB is the owner of the project, liasoning with external agencies shall be done by BWSSB. However, Contractor will assist BWSSB in the process, but ownership shall lie with BWSSB. Please review and amend.	Tender Conditions Prevails The requirement of Liasoning activities shall be as indicated in the tender document

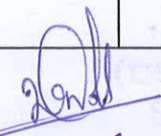

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
6	Volume-II, Section 7, Part 5 - 9	Draining of Big Structure	As per clause "The Plant Drain Pumping Station, Plant Drain Pumps, and other related equipment and controls shall be designed and sized to allow draining of the structure with the largest volume from full to empty within eight (8) hours"	Tender Conditions prevails
			The big process structures like bioreactor, clarifiers etc. are drained only during the planned maintenance by portable pumps. We understand that above requirement is applicable for small civil tanks. Please confirm.	
7	Volume-II, Section 7, Part 5 - 37	Treated effluent quality for Reuse	Achieving treated effluent quality values of TN < 5 mg/l and BOD < 5 mg/l is highly challenging, even after tertiary treatment.	Tender Conditions prevails
			According to the CPHEOO Manual, Table 7.19, which outlines the recommended standards for treated sewage quality for reuse, the suggested limits for TN and BOD are 10 mg/l.	
			Please review and amend the Treated effluent quality as per CPHEOO guidelines.	
8	Volume-II, Section 7, Part 5 - 38	Sludge Quality	For 10 MLD WwTP at U MKaval, the sludge quality after Solar drying is required as per EPA Class-A standards.	Tender Conditions prevails
			However, there is no reference study or certificate to prove that solar dried sludge complies with EPA Class-A standard (during 100% time)	
			Kindly revise the sludge quality as EPA Class-B standard sludge after Solar drying.	
9	Volume-II, Section 7, Part 5 - 39	TSPS - Trash Screen & Coarse Screen	Tender specifies max. velocity as 0.9m/s for designing Screens at peak flow, which is very low and result in unnecessary big civil structures.	Tender Conditions prevails
			Referring to other BWSSB STP projects and screen supplier's recommended design, the screens are designed for max. 1.2m/s velocity at peak flow.	
			Kindly review and amend.	
10	Volume-II, Section 7, Part 5 - 39	STP - Fine Screen channel	Tender specifies max. velocity as 0.9m/s for designing Screens at peak flow, which is very low and result in unnecessary big civil structures.	Tender Conditions prevails
			Referring to other BWSSB STP projects and screen supplier's recommended design, the screens are designed for max. 1.2m/s velocity at peak flow.	
			Kindly review and amend.	
11	Volume-II, Section 7, Part 5 - 39	STP - Fine Screen channel	Tender specifies Fine screen opening as 4mm, which is very small and will result in high head losses, frequent clogging and difficulties in routine maintenance.	Tender Conditions prevails
			Referring to other BWSSB STP projects and screen supplier's recommended design, the clear opening for screens as 6mm is most optimum for smooth functioning.	
			Kindly review and amend.	


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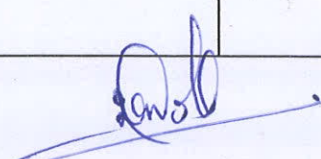
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
12	Volume-II, Section 7, Part 5 - 45	N-1 Design	As per said clause "The Bidder shall provide calculations for operating the WwTP at Design Flows with 1 tank/unit/module offline for maintenance." The larger process units like Aeration tank, clarifiers etc. are not redundant in design. However, all the associated equipment like mixers, blowers etc. shall be designed with standby condition. Please review and confirm.	Tender Conditions prevails
13	Volume-II, Section 7, Part 5 - 75	Gravity Thickener	As per tender design, the watery sludge (@ 0.8% consistency) from Aeration Tank is directly fed to Centrifuges, which will result in high volumetric loading, high polymer consumption and inconsistent dewatering efficiency. We request that the sludge (@ 0.8% consistency) from Aeration Tank shall be first fed to Gravity Thickener, producing sludge at 5% consistency and then the thickened sludge shall be fed to Centrifuge. This will result in low poly consumption, lower operational cost and high dewatering efficiency. Kindly review and confirm.	Tender Conditions prevails
14	Volume-II, Section 7, Part 5 - 78	Reuse plant – 10 MLD UM Kaval	Tender doesn't specify design details for Reuse plant at 10 MLD UM Kaval. The Reuse plant shall be membrane-based treatment or as per bidder's design? Please confirm.	Tender Conditions prevails
15	Volume-II, Section 7, Part 5 - 80	Dewatered Sludge %	The Minimum Solid Concentration in Dewatered Sludge is mentioned as 25%, which is unrealistic for STP plant. After digestion, the max consistency achieved post dewatering via centrifuges is 22%. Kindly review and revise.	The minimum solid concentration for Anaerobic digested sludge after Centrifuge shall be considered as 22%.
16	Volume-II, Section 7, Part 5 - 85	Primary Clarifier	Tender specifies clarifier type as "Plate Settlers with scum collection and removal system". Circular conventional clarifiers without plate settlers shall also be allowed which are proven and installed in various BWSSB STPs. Also, the type of clarifiers (plate/tube/conventional) shall be open as per bidder's design as bidder is responsible for outlet treated effluent quality. Kindly accept and revise.	Tender Conditions prevails
17	Volume-II, Section 7, Part 5 - 99	Digester VSS reduction	Please indicate the maximum percentage of VSS reduction that should be considered for the design of digester.	The minimum percentage of VSS reduction to be considered for the design of digester is 50 %.
18	Vol.2, 124, 126 Part 5-37 Part 5-38 Part 5-41	Page no 24 Clause no 15.22.1 TSPS & WwTPs Design/Sizing Criteria. Peak factor is mentioned in the Design criteria Table, but Peak hours is not mentioned with specification.	Peak factor is mentioned but the duration of peak factor is not mentioned in terms of hours. We need clarity about whether the biological components shall be designed for average flow only or including peak flow load too. Kindly specify if biological design should consider peak flow or not as it has significant bearing on the performance and technical comparison of different technologies for evaluation.	Tender Conditions prevails
19	Vol.2, 148 Part 5-60	Page no 24 Clause no 15.22.1 TSPS & WwTPs Design/Sizing Criteria : IFAS /MBBR media filling ratio and MOC	We request to allow free floating MBBR media, there are various advanced materials also available other than normal plastic media, kindly allow use of MBBR media having reticulated PU foam as approved MOC for the MBBR media. Also, each MBBR carriers have quite varying surface area and removal rates obtained with them, the filling ratio would also vary from one supplier to other, thus, kindly allow a filling ratio of 12-15% for PU foam based MBBR media. This will give advance technology benefits to plant performance	Tender Conditions prevails



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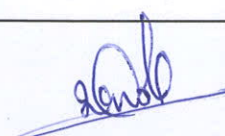


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Response to Pre-Bid Queries

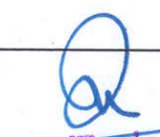
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
20	General	Minimum expected life for MBBR Media	We humbly request to consider Media life as per manufacturers guaranteed media life. We request to consider minimum 12 years as media life for PU foam media as practically it is feasible. This will have a significant impact on life cycle cost consideration. As supplier is agreed to 12 years media life guarantee, it should be allowed in the calculation of life cycle cost estimation.	Tender Conditions prevails
21	Vol.2, 455,458 Part 8-89 Part 8-92	8.18.8 High Speed Turbo Blower & 8.18.9 Centrifugal single stage Blower:	We humbly request client to allow for Positive Displacement Rotary Helical Hybrid Air Blowers in addition to available Twin lobe Blower /Tri lobe Blower / Turbo Blowers ,for these tenders as this Technology is Proven , highly sustainable & Efficient for industrial applications .It is designed for Indian environment & well suited for sewage treatment plants to cope up with varying flow & discharge pressure requirements , it is 100% make in India product	Not Acceptable, Tender Conditions Prevails
22	General	Soil analysis is not available	Kindly provide the soil analysis.	At Hulimavu WwTP Pile foundations is required for major structures. For minor structures, soil stabilisation using geotextile for the top 1-1.5m may be considered with 10T/sqm minimum. For piling minimum 450mm dia pile diameter for a minimum 15m length and 60- 75 Ton Axial capacity may be considered. For Anjanapura, UM Kaval and Iblur WwTP the soil shall be strengthened using Geotextile or any other suitable methods for the top 1-1.5m depth if required. Minimum requirements at the site are mentioned in Cl 1.6 of part 1 in volume 2, section 7. However, the tenderers are requested to make their individual site visit and bid as per the actual site requirements. Also please refer to cl 1.14 & 1.15 of part 11, volume 2 section 7, Maximum safe bearing capacity and pile capacity of soil strata shall be taken as determined by the Bidder through his own independent investigations. However Tenderer is responsible for the details considered in his design and estimation for Tendering purpose. No claim in this regard will be considered during execution phase
23	General	Plot layout	Kindly provide plot dimensions for plant layout arrangements.	Refer Addendum-1 for AutoCAD drawings
24	General	Drawings	Please provide the route map, L-section, Road/Nallah crossing, Contour map of the site.	All the required documents /drawings required for bidding requirement are already included in the Tender documents. Post award of Contract, on completion of confirmatory topographical survey by the selected tenderer, Sewerline related drawings will be issued as per Contract Conditions.
25	Vol.2, Page 721	Make list or vendor list	Please allow us to propose alternate vendor for better quality and more efficient product	Tenderer can propose the alternate vendor satisfying the criteria defined in the Volume 2/Section 7 under respective parts.
26	General	Plot areas & Riverbed Profile	Kindly furnish the area availability for SPS locations with riverbed profile.	Refer volume 4, topographical survey layout of proposed plants are provided with tentative data for tendering. Please also refer cl 1.5 scope of works for works-A, to be followed during execution stage.
27	General	Excavation Profile	Kindly provide us the Excavation profile for Pipeline, STP Location, ISPS Location	Sewerage Network is covered under Item rate contract. The Employer requirements are mentioned in the price proposal. Any additional data required, can be obtained by making individual site visits.



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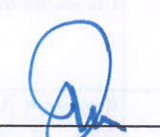
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
28		3.1.1 General Construction Experience: The Tenderers shall provide evidence that (a) it has been actively engaged in the civil works construction business for at least the last five years prior to the date of submission of applications, in the role of prime contractor, management contractor, partner in a joint venture, and (b) The Tenderer must have generated minimum average annual turnover of Rs. 342.13Crores in any two financial years calculated as total certified payments receivedfor contracts in progress or completed, within the last 5 financial years. The average annual turnover is defined as the total of certified payment certificates for works in progress or completed by the firm or firms comprising the Tenderers, divided by the number of years.	3.1.1 General Construction Experience: The Tenderers shall provide evidence that (a) it has been actively engaged in the civil works construction business for at least the last five years prior to the date of submission of applications, in the role of primecontractor, management contractor, partner in a joint venture, and (b) The Tenderer must have generated minimum average annual turnover of Rs. 342.13Crores in any two financial years calculated as total certified payments receivedfor contracts in progress or completed, within the last 10 financial years.The average annual turnover is defined as the total of certified payment certificates forworks in progress or completed by the firm or firms comprising the Tenderers, dividedby the number of years.	Not Acceptable, Tender Conditions Prevails
29		3(a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or leadpartner and or partner in a joint venture shall provide evidence that it hassuccessfully completed, including Design, Procurement, Supply, Installation,Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, andInstrumentation Works of One (1) No. WwTP contract of value not less thanRs.127.54 Crores in last Five (5) financial years. (ii) The Tenderer as sole entity or lead partner and or partner in a joint venture shallprovide evidence that it has successfully completed procurement, execution andcommissioning of Underground Sewerage network for the Contract Value not less than Rs.40.72 Crores in last Five (5) financial years.	3(a) (i) Contracts of Similar Size and Nature: The tenderer as sole entity or leadpartner and or partner in a joint venture shall provide evidence that it hassuccessfully completed, including Design, Procurement, Supply, Installation,Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, andInstrumentation Works of One (1) No. WwTP contract of value not less thanRs.127.54 Crores in last Ten (10) financial years. (ii) The Tenderer as sole entity or lead partner and or partner in a joint venture shallprovide evidence that it has successfully completed procurement, execution andcommissioning of Underground Sewerage network for the Contract Value not less than Rs.40.72 Crores in last Ten (10) financial years.	Not Acceptable, Tender Conditions Prevails
30		(b) Experience in Key Activities: The Tenderers shall provide evidence that it has aminimum experience in the following key activities, (i) Experience in Execution of STPsThe Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall havesuccessfully completed, including Design, Procurement, Supply, Installation, Construction,Testing, and Commissioning of all Civil, Mechanical, Electrical, and InstrumentationWorks of minimum One (1) No. WwTP of 52 MLD capacity and above or Two (2) Nos.Waste water Treatment Plants of minimum 26 MLD capacity with Biological NutrientRemoval (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADAIntegration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	(b) Experience in Key Activities: The Tenderers shall provide evidence that it has aminimum experience in the following key activities,(i) Experience in Execution of STPs The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall havesuccessfully completed, including Design, Procurement, Supply, Installation, Construction,Testing, and Commissioning of all Civil, Mechanical, Electrical, and InstrumentationWorks of minimum One (1) No. WwTP of 52 MLD capacity and above or Two (2) Nos.Waste water Treatment Plants of minimum 26 MLD capacity with Biological NutrientRemoval (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADAIntegration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform<100MPN/100ml and should be inoperation for a period of one year during the last 10 years as on date of Bid submission.	Not Acceptable, Tender Conditions Prevails


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
31		(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One(1) No. and above reuse plant of 18 MLD or Two (2) Nos. reuse plant (with Tertiary Treatment) of minimum 9 MLD capacity and should be in operation for a period of one year during the last 5 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter Unit Specified Maximum Concentration Turbidity NTU < 2.0 TDS mg/L < 1000 TN mg/L < 5.0 BOD mg/L < 5.0 COD mg/L < 30.0 TP mg/L < 1.0 Fecal Coliform MPN/100 ml Nil	(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One(1) No. and above reuse plant of 18 MLD or Two (2) Nos. reuse plant (with Tertiary Treatment) of minimum 9 MLD capacity and should be in operation for a period of one year during the last 10 years as on date of Bid submission. The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent Parameter Unit Specified Maximum Concentration Turbidity NTU < 2.0 TDS mg/L < 1000 TN mg/L < 5.0 BOD mg/L < 5.0 COD mg/L < 30.0 TP mg/L < 1.0 Fecal Coliform MPN/100 ml Nil	Not Acceptable, Tender Conditions Prevails
32		iii. Experience in Power Generating Facility The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Ventures shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of at least One (1) No. Wastewater Treatment Plant of 28 MLD capacity with power Generating Facility of minimum 480 kw per hour from Anaerobic Digestion and in operation for One year in last five years as on date of bid submission.	iii. Experience in Power Generating Facility The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Ventures shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of at least One (1) No. Wastewater Treatment Plant of 28 MLD capacity with power Generating Facility of minimum 480 kw per hour from Anaerobic Digestion and in operation for One year in last ten years as on date of bid submission.	Not Acceptable, Tender Conditions Prevails
33		Note: 1. Tenderer must submit the MOU with Technology provider for proposed process technology (SBR/IFAS/MBBR) under this contract, failing which the Tender will be considered as technically non-responsive. 2. Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) STP same as 3.1.2 (b)(i)	If technology provider has executed projects on similar technology as well as capacity as called for in the NIT, can this be considered as technical prequalification for the cited tender.	Tender conditions prevails.
34		Retention Amount- The retention amount at 5% of each RA bills will be deducted. 50% of retention amount will be released after successful completion, commissioning and handing over plant. Balance 50% will be released after completion of Defects Liability Period (DLP). This balance 50% may also be released on submission of equivalent amount of BG at the discretion of Employer.	After standard deduction a further retention of 5% on every RA bill will greatly affect cash flows. Hence, kindly reconsider.	Not Acceptable, Tender Conditions Prevails
35	Volume-1, section-1, 8 of 234	Contractors should have registration in KPWD of State Government organization, public sector under takings, other state Governments and the documentary evidence towards the same shall be furnished.	1) The bidder presumes that KPWD registration required post award of the project, kindly confirm. 2) The bidder presumes that, If contractor has registration in any one of the mentioned sectors will suffice the purpose, kindly confirm.	Tender Conditions Prevails

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
36	Volume-1, section 5B, Pg.No. 185 of 234	Payments shall be adjusted for deductions for advance payments, other recoveries in terms of the contract and taxes, at source, as applicable under the law. The Employer shall pay the Contractor the within 60 days of submission of bill. The Contractor shall be liable to pay liquidated damages for shortfall in progress as per milestone set in Works Contract. For Progress beyond the agreed programme, payment is subject to availability of the grants.	Bidder request to reduce the payment release date from 60 days to 30 days from the date of submission of bill. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
37	Volume-1, section-2, Pg. No. 32 of 234	Security Deposit Within 20 days of receipt of the Letter of Acceptance, the successful Tenderer shall deliver to the Employer a Security deposit in any of the forms given below for an amount equivalent to 5% of the Works Contract Price (excluding O&M Price during construction period) plus additional security for unbalanced tenders in accordance with Clause 25.5 of ITT and Clause 44 of the Conditions of Contract. Tenderer is required to submit the security deposit amount equivalent to 5% of total O&M Price for 10 years at the start of O&M period.	The tender does not specify the exact amount or percentage for the additional security required in case of an unbalanced bid. Kindly confirm the applicable provisions.	Tender Conditions Prevails
38	volume-1, 146 of 234	Any quantities which may be set out in the Price Schedule are only indicative quantities and are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract. The Contractor is responsible to assess the exact requirements and quantities for all items for the purpose of quoting his rates, and no variation in rates will be allowed on account of any variation in the indicative quantities.	Bidder presume that the sizes and material of construction (MOC) specified in the tender documents and price schedule shall be executed as indicated therein. Kindly confirm that, in the event of any changes to the specified sizes or MOC during the design and execution phases—whether due to client instructions, site conditions, or design development—such changes will be duly considered for price variation in accordance with the applicable contractual provisions.	Tender Conditions prevails
39	volume-2, 7 of 1349	Technology for 35 MLD WWTP A2O Process, or SBR Process, incorporating biological nitrification, denitrification, and phosphorus removal. All these process options shall be followed by Disc filters, Chlorine Disinfection and Biogas with Power generation & Mechanical Sludge Dewatering. And Industrial Reuse Facilities with GLR and Pump House as defined. (For 35 MLD WwTP at Anjanapura)	Kindly confirm whether the proposed 35 MLD WWTP technology can be selected from any of the following processes: Extended Aeration (EA), Integrated Fixed-film Activated Sludge (IFAS), Moving Bed Biofilm Reactor (MBBR), or Sequencing Batch Reactor (SBR) 2) if bidder chooses 2 different technology for any 2 WWTP, whether we need to submit 2 MOU respectively. kindly confirm.	1) As per Volume 2 / Section 7, Part 5- 79, b) WwTP at Anjanapura 2) Bidder can propose any technology as defined in Tender document Volume 2, Section 7. MOU shall be provided for respective technology proposed by bidder.
40	volume-1, SECTION 6 : CONTRACT DATA [WORKS-B] & section 2, 221 of 234 & 31 of 234	Work Order & Agreement As per Page no:221 of 234 -The Site Possession Date is: After Issue of work order & As per Page no :31 of 234- Notification of award and signing of Agreement	The bidder seeks clarification on whether the Work Order and the Agreement are the same or distinct documents. Kindly confirm.	Work order and agreement are separate but are issued simultaneously. From the date of agreement, the site possession date will be considered.
41	volume-1, section 2, 26 of 234	The Tenderer shall furnish, as part of his tender, earnest money deposit in the amount as shown in column 5 of the Table of IFT for this particular work. This earnest money deposit shall be in favour of Chairman, BWSSB through KPPP, payable at BANGALORE from any Nationalised / Scheduled Indian banks. 13.2 Instruments having fixed validity issued as earnest money deposit for the tender shall be valid for 45 days beyond the validity of the tender. EMD shall be paid through OTC, NEFT, and DEBIT CARD through KPPportal only	The bidder understands that the EMD may be submitted by Demand Draft or another acceptable instrument; however, the KPPP portal does not provide an option to upload it. Kindly clarify the required submission procedure.	Tender Conditions prevails
42	volume-2, SECTION-7/Part-I, 17 of 1349	Noise Level Noise Levels inside the Process Buildings (Maximum)-80 dba & Noise Levels at Plant Boundary (Maximum)-60 dba	Bidder presumes that maximum 80 DBA will be achieved within 1.5 m from the each equipment inside the process building.	Tender Conditions prevails
43	volume-1, appendix-6, 217 of 234	Functional Guarantee Damages during Test on Completion for a given STP, Damages shall not exceed 2% of that STP's Contract Price	Bidder presumes that, 2% for each STP contract price, kindly confirm	Yes, it is for each individual WwTP

Team Leader

CE (Project)
BWSSB

Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
44	volume-2, Part-1 /1.7, 15 of 1349 Part-1 /1.12, 18 of 1349	House service connection line to be installed. 1.12 Access for Other Contractors -Works of other Contracts taking place on the same Site or adjoining the Site include but are not limited to the following:1. Providing and laying laterals sewers and house connection chambers for 110 Villages;2. Regular operation and maintenance work of existing sewers, ISPS, TSPS and STPs by BWSSB.	Based on these two clauses bidder presumes that house service connection will lies with other contractor so it is not the part of this contract. Kindly confirm	Tender Conditions prevails
45	Volume-2, part -3/3.16.1, 47 of 1349 Volume-1, SECTION 1, 7 of 234	Drawings and all other submittals required during the bidding stage and after the award of the contract shall be submitted in editable electronic softcopy format on CD(s) or DVD(s) as well as in hardcopy paper format. The Contractor shall submit documents in soft copies and eight (8) sets of hard copies to the client for approval. The tender shall be submitted on the website prior to the deadline of submission of tenders as given in Para 3 above. Hard copies of the proposal will not be accepted by the Employer. The system will automatically generate a time stamp that will acknowledge the submission of the tender by the Tenderer. Any attempt of tender submission after the deadline of the submission of tenders will be automatically rejected by the system. The price proposals will be opened in the presence of representatives of those technically qualified Tenderers, who choose to attend at the time and at the address to be advised by the Employer after the evaluation of the Technical Proposals. The Employer will not be responsible for any costs or expenses incurred by the Tenderers in connection with preparation and / or submission of tenders.	The two clauses appear to be contradictory , bidder presumes that document submission is only portal submission, so kindly confirm.	Tender Conditions Prevails. Clause is applicable for post award of contract. For bidding, submission is through KPP Portal only.
46	volume -1, 5 of 234	Scope of work, Design, Engineering, Construction and Commissioning of Wastewater Treatment Plants with Tertiary Treatment Facility, Biogas Generation & Solar Sludge Drying Bed and Intermediate Sewage Pumping Station along with Operation & Maintenance thereof for Ten Years [Works - A] and Procurement and Construction of Rising Main, Main Sewers and Laterals including Machine holes and Lift Sewage Pumping Stations [Works – B] Hybrid Mode for Bommanahalli Zone in 110 Village Areas (Phase-II) Under Karnataka Water Security and Disaster Resilience Program (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)	If work-A is completed and Work-B is under process , kindly confirm whether we can get substantial certificate and start the O&M and DLP for work-A separately. Kindly confirm.	Tender Conditions prevails. Tenderer to refer Volume 1, Cl. No. 61.1.
47	TECHNICAL SCHEDULE X, 1346 of 1349	As per 2.2 table -Guaranteed Power Consumption(kWh per Month) & PCD = Guaranteed power consumption under design conditions for complete works of plant, (kWh per day)	1) PCD has been mentioned as kwh per month and kwh per day which is contradictory . Kindly clarify which we need to consider. 2) Kindly confirm whether per month , whether we need to consider for 31 days or 30.5 days	The requirement shall be as mentioned in the tender document.
48	Price schedule,		Kindly share the excel format for the complete BOQ for works B	Not Acceptable, Tender Conditions Prevails
49	Tender Fee & EMD		Bidder presume that Tender fee and EMD amount mentioned in the tender is inclusive of GST. Kindly confirm.	Tender fee and EMD amount shall be paid as indicated in the KPPP portal.
50	General	Water and electricity for construction till commissioning	Bidder presumes that power and water required for the construction work will be provided by employer at one point(FOC)	Tender Conditions Prevails
51	General	lack of necessary document	With reference to the tender document, the following documents are not available for preliminary costing and consideration for bid submission: LS(Longitudinal sectional)Drawing for overall Bommanahalli, Geo technical report for the WWTP & Lifting Station location .	All the required documents /drawings required for bidding requirement are already included in the Tender documents
52	General		Bidder preumes that Vendor list mentioned in the tender is tentative, bidder can propose the make list further during detail engineering for employer approval.kindly confirm	Tender Conditions prevails

Team Leader

Response to Pre-Bid Queries

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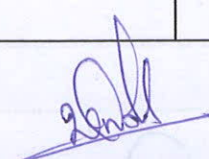
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
53	General	Force Majeure	Bidder observed that force majeure was not available. So kindly provide the same in addendum.	Pl. refer to GCC Clause:38
54	General	Change in law	Bidder observed that change in law was not available. So bidder presumes that any impact based on the change in law will be considered as per actuals.	Refer Addendum-1
55	General	Suspension of work	Bidder observed that suspension of work clause was not available. So kindly provide the same in addendum.	Please refer Special Conditions of Contract Clause: 25.9.5.2
56	Appendix-I, 206/234	A) Terms of Payment Site survey and subsoil investigations 25% - Completion of field surveys and subsoil investigations and de-mobilization from site of survey team 75% - Submission of surveys and soil investigation reports and acceptance by the Employer's Representative.	In order to facilitate improved cash flow for the Contractor during the site survey and subsoil investigations for the given scope of works, we hereby formally request consideration of the following payment terms: 50% - Completion of field surveys and subsoil investigations and de-mobilization from site of survey team 50% - Submission of surveys and soil investigation reports and acceptance by the Employer's Representative. This request is made to ensure financial stability throughout the preliminary phases of the project. Please confirm acceptance or provide any revisions deemed necessary.	Not Acceptable, Tender Conditions Prevails
57	Appendix-I, 206/234	A) Terms of Payment Detailed Designs and Construction documents 80% - Substantial completion, submission and approval by the Employer's Representative of the designs, drawings and construction documents for all major items of work Code B approval : 80% 20% - Submission and approval by the Employer's Representative of the final designs and construction documents for all remaining and miscellaneous construction details and working drawings. Code A approval: 20%	In order to facilitate improved cash flow for the Contractor during the detailed design and construction documents for the given scope of works, we hereby formally request consideration of the following payment terms: 20% - Submission of the designs, drawings and construction documents for all major items of work. 60% - Substantial completion, final submission and approval by the Employer's Representative of the designs, drawings and construction documents for all major items of work. Code B approval : 60% 20% - Submission and approval by the Employer's Representative of the final designs and construction documents for all remaining and miscellaneous construction details and working drawings. Code A approval: 20% This request is made to ensure financial stability throughout the preliminary and progressive phases of the project, ensuring smooth execution and adherence to project milestones. Please confirm acceptance or provide any revisions deemed necessary.	Not Acceptable, Tender Conditions Prevails
58	Volume 2 / Section 7, Part 1 - 6	1.5 Scope of Work for Works-A	Kindly provide the HFL at discharge point of water bodies for the following WWTP 1. Iblur - 5 MLD 2. U M Kaval - 10MLD 3. Hulimavu - 15 MLD 4. Anjanapura - 35 MLD	Refer CI 1.6 of part 1 in volume 2, section 7.
59	Volume 2 / Section 7, Part 5 - 108	ISPS: Pumping station (Wet Well)	Kindly provide the head requirement for the following ISPS: 1. Vakil Garden - 3 MLD & 2. Gottigere 4 MLD	1. Design pumping head of 28m (approx.) for Vakil Garden 2. Design pumping head of 39m (approx.) for Gottigere However post award of tender, actual pumping head has to be assessed.
60	Volume 2 / Section 7, Part 1 - 4	1.4 Components List for Works-B	Kindly provide the head requirement for the following LPS: 1. Bora Layout - 2 MLD	Refer BOQ for pump head.
61	Volume 2 / Section 7, Part 5 - 73 & Part 5 - 96	Reuse facilities	Bidder shall also consider flat sheet type of membrane for the UF in reuse facilities of following plants: 1. U M Kaval & 2. Anjanapura	Tender Conditions prevails
62	Volume 2 / Section 7, Part 5 - 73 & Part 5 - 96	Reuse facilities	UF will be designed for hourly operating flow of reuse facilities. The UF system shall not be designed for Peak plant flow conditions. Kindly confirm.	Refer Addendum-1

Team Leader

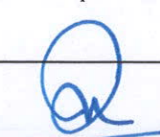
Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
63	Volume 2 / Section 7, Part 5 - 73	Reuse facilities	UF Recovery is mentioned as 95%. We hereby request, it shall be as per the manufacturers recommendation based on the inlet UF parameters. Please confirm.	Refer Addendum-1
64	Volume 2 / Section 7, Part 5 - 73 & Part 5 - 96	Reuse facilities - Membrane Type	The bidder may also opt for the PES membrane type. Please confirm.	Tender Conditions prevails
65	Volume 2 / Section 7, Part 5 - 91	Decanter	Bidder shall consider MOC for decanter as SS304.	Tender Conditions prevails
66	Volume 2 / Section 7, Part 5 - 37	Treated effluent quality requirements for reuse	BOD and COD at the inlet of UF is specified as 10 mg/l and 50 mg/l respectively. Though organics due to suspended solids will get slightly removed in the UF, outlet BOD and COD from the UF shall not be achieved to the levels of <5 mg/l and <30 mg/l respectively. So reuse water quality parameters shall be same as the treated effluent water quality parameters with respect to BOD and COD. Please confirm.	Tender Conditions prevails
67	Volume 2 / Section 7, Part 5 - 15	5.15 Hydraulic Design Requirement	Kindly mention the lean flow for the following wastewater treatment plants with terminal pumping stations: 1. Iblur - 5 MLD 2. U M Kaval - 10MLD 3. Hulimavu - 15 MLD 4. Anjanapura - 35 MLD	Tenderer may consider, lean flow factor as 0.5 times the average flow for design.
68	Volume 2 / Section 7, Part 1 - 4	1.4 Components List for Works-B	As per Tender: Contractor to connect the Pumping flow from Gottigere ISPS to existing rising main as per the battery limits shown in Paragraph 1.15 Bidder's Query: Please provide Existing rising main route, Elevation level and length of it.	Minimum flow rate of each pump is considered as 250 m3/hr with pumping head of 39m (approx.) Total number of pumps shall be minimum 3 Nos. (2W+1S)
69	Volume 2 / Section 7, Part 5 - 47, 52,59,64	Secondary Treatment - 4 (Zones/Tanks)	The number of secondary treatment tanks are mentioned as 4 tanks. We here by request that, the bidder can consider 4 tanks for Anjanapura - 35 MLD , However, for smaller plant which shall be as per bidder's design for the following wastewater treatment plants with terminal pumping stations:1. Iblur - 5 MLD2. U M Kaval - 10MLD3. Hulimavu - 15 MLDPlease confirm.	Tender Conditions prevails
70	Volume 2 / Section 7, Part 5 - 101	Biogas Dryer	Can the bidder propose suitable arrangement to reduce the moisture content in the biogas prior to feeding as per biogas genset.	Tender Conditions prevails
71	Volume 2 / Section 7, Part 8 - 182	Consolidated Mechanical Equipment Vendor List	In addition to the vendors listed in the tender document, Bidder can also suggest additional vendors.	Tenderer can propose the alternate vendor satisfying the criteria defined in the Volume 2/Section 7 under respective parts.
72	Volume 2 / Section 7, Part 5 - 80	Sludge Quality Requirements (After Centrifuge)	The solids concentration in dewatered sludge shall be limited to 20% similar to other STP's in this tender and other STP plants in operation in BWSSB plants. Please confirm.	The minimum solid concentration in digested sludge shall be considered as 22%. For all un-digested sludge it remains 20% as per tender clause.
73	Volume 2 / Section 7, Part 1 - 4	Site visit	As per the site visit, we understand that sewage from the 3 MLD ISPS (Vakil Garden) will directly goes to 10 MLD U M Kaval WwTP. As per the tender ridge machine hole not available. So kindly clarify.	Refer Addendum-1


Team Leader

**PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB**


**CE (Project)
BWSSB**

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
74	Volume - 2 / Section - 7 Part - 1, Part 1 - 8#12 of 1349	Additional Scope Details for Civil Works under Works – A 1. Iblur 5 MLD WwTP with TSPS:1. A RCC Precast compound wall shall be constructed for a length of not less than 200 m. 2. UM Kaval 10 MLD WwTP with TSPS:1. A RCC Precast compound wall above Retaining wall shall be constructed for a length of not less than 400 m all-round the site. 3. Hulimavu 15 MLD WwTP with TSPS:1. A RCC Precast compound wall shall be constructed for a length of not less than 150 m.2. A gabion wall with chain-link fencing shall be constructed for a length of not less than 200 m. 4. Anjanapura 35 MLD WwTP with TSPS:1. A RCC Precast compound wall above RCC Retaining wall shall be constructed all-round the WwTP site for a length of not less than 800 m. 5. Gottigere 4 MLD ISPS:4. A RCC Precast compound wall shall be constructed for a length of not less than 120 m.5. A gabion wall with chain-link fencing shall be constructed for a length of not less than 50 m 6. Vakil Garden 3 MLD ISPS:3. A gabion wall with chain-link fencing shall be constructed for a length of not less than 50 m.5. A RCC Precast compound wall shall be constructed for a length of not less than 50 m.	Based on the tender layout the length of Precast compound wall & Gabion wall is varies with the tender specification. Hence, request you to provide the actual length of the Precast compound wall & Gabion wall with Chain link fencing for all the proposed WwTP & all the ISPS as all the bidder will be considering at uniform length.	Minimum requirements at the site are mentioned in CI 1.6 of part 1 in volume 2, section 7. However, the tenderers are requested to make individual site visit and bid as per the actual site requirements.
75	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	Additional Scope Details for Civil Works under Works – A 1. Iblur 5 MLD WwTP with TSPS: 4. An approach road of 5m wide shall be provided for a length of not less than 20 m. 2. UM Kaval 10 MLD WwTP with TSPS: 4. An approach road of 5m wide shall be provided for a length of not less than 50 m. 3. Hulimavu 15 MLD WwTP with TSPS: 6. An approach road of 5m wide shall be provided for a length of not less than 20 m. 4. Anjanapura 35 MLD WwTP with TSPS: 6. An approach road of 5m wide shall be provided for a length of not less than 100 m. 5. Gottigere 4 MLD ISPS: 3. An approach road of 5m wide shall be provided for a length of not less than 80 m. 6. Vakil Garden 3 MLD ISPS: 4. An approach road of 5m wide shall be provided for a length of not less than 20 m.	Request you to indicate the routing of the approach road from the main road in the tender layout.	Refer volume 4, topographical survey layout of proposed plants are provided with tentative data for tendering. However, the tenderers are requested to make individual site visit and bid as per the actual site requirements.
76	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	Additional Scope Details for Civil Works under Works – A 1. Iblur 5 MLD WwTP with TSPS: 7. Dismantling and disposal of existing building and RCC tank at the site shall be carried out.	Kindly share the as-built drawing details of the existing building and RCC tank.	At Iblur Site, there are few Structures, which need to be demolished. The tenderers are requested to make individual site visit and ascertain the data, required for structures to be demolished and disposed. At Other WwTP sites demolition of structures is not required.
77	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	2. UM Kaval 10 MLD WwTP with TSPS: 1.A RCC Precast compound wall above Retaining wall shall be constructed for a length of not less than 400 m all-round the site.	We presume that two sides of boundary shall be provided with Precast compound wall and other two sides are Gabbion with chain link fencing for UM Kaval 10 MLD WwTP as indicated in the tender dwg.no- TN-KWSDRP-WBS3-CV-3008 of volume -4	Refer to CI 1.6 of part 1 in volume 2, section 7. A RCC Retaining wall with RCC Precast compound wall above Retaining wall shall be constructed for a length of not less than 400 m all-round the site.

Team Leader

PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSBCE (Project)
BWSSB

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
78	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	2. UM Kaval 10 MLD WwTP with TSPS: 1.A RCC Precast compound wall above Retaining wall shall be constructed for a length of not less than 400 m all-round the site.	We presume that, the retaining wall is not required for UM Kaval 10 MLD WwTP as per dwg.no- TN-KWSDRP-WBS3-CV-3008 of volume -4.	Refer to Cl 1.6 of part 1 in volume 2, section 7. A RCC Retaining wall with RCC Precast compound wall above Retaining wall shall be constructed for a length of not less than 400 m all-round the site.
79	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	2. UM Kaval 10 MLD WwTP with TSPS: 3.The site shall be filled up to the FGL (approximately 3 to 4 m) with approved soil	As per tender Topo dwg No TN-KWSDRP-WBS3-CV-3008 of volume -4 the existing average ground level is varies from 836 to 842 which is above the HFL. Hence 3 to 4m filling is not envisaged for UM Kaval 10 MLD WwTP. Please confirm	Tender condition prevails.
80	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 12 of 1349	2. UM Kaval 10 MLD WwTP with TSPS:7. FGL +836.950m	Since the Existing Ground level is above the HFL We presume that, the Existing ground level shall be maintained as Finished Ground Level for UM Kaval 10 MLD WwTP, Hence Cutting/filling is not envisaged.Please confirm.	Tender condition prevails.
81	Volume - 2 / Section - 7 Part - 1, Part 1 - 9 # 13 of 1349	3. Hulimavu 15 MLD WwTP with TSPS: 3. The Nala flowing inside the site shall be diverted using a RCC drain with both side Retaining walls. & 4. Anjanapura 35 MLD WwTP with TSPS: 3. The Nalas flowing near the boundary of the site shall be diverted by constructing one side RCC Retaining wall on the WwTP side.	Please provide the detailed drawing by indicating Nalla flow direction, width, depth of Nalla, bed level etc., for both the Hulimavu 15 MLD and Anjanapura 35 MLD WwTP site	Refer volume 4, topographical survey layout of proposed plants are provided with data for tendering. However, the tenderers are requested to make individual site visit and bid as per the actual site requirements.
82	Volume - 2 / Section - 7 Part - 1, Part 1 - 8 # 11 of 1349 & Part 1 - 9 # 13 of 1349	3....The FGL shall be at least 0.75m above the HFL for all sites. & 4. Anjanapura 35 MLD WwTP with TSPS: 9. FGL +835.000m 10. HFL +821.000 m	As per tender topo dwg No -TN-KWSDRP-WBS3-CV-3010 of volume -4 the average ground level is varies from 816 to 838 Hence the minimum FGL shall be maintained as 821.75 (HFL+0.75) Please confirm.	Since the site is having sloping terrain, it shall be graded to Stepped flat terrain during execution stage to accommodate the WwTP units based on the Hydraulics. Therefore partial cutting/filling will be based on Successful tenderers design. Hence, at this stage, the tenderers are requested to make individual site visit and bid as per the site requirements.
83	Volume - 2 / Section - 7 Part - 1, Part 1 - 9 # 13 of 1349	4. Anjanapura 35 MLD WwTP with TSPS: 2. A 5.0m wide Bridge shall be constructed to access the Wwtp Site	Request you to provide the details along with length, MOC, level of the bridge, bed level of the Nalla / drain.	Refer volume 4, topographical survey layout of proposed plants are provided with tentative data for tendering. However, the tenderers are requested to make individual site visit and bid as per the actual site requirements.
84	Volume - 2 / Section - 7 Part - 1, Part 1 - 10 # 14 of 1349	6. Vakil Garden 3 MLD ISPS: 7. FGL +844.750m 8. HFL +844.000 m	Since the Existing Ground level is above the HFL as per topo dwg No -8.TN-KWSDRP-WBS3-CV-3012 of volume -4, We presume that, the Existing ground level shall be maintained as Finished ground level for Vakil Garden 3 MLD ISPS Please confirm.	Since the site is having sloping terrain, it shall be graded to Stepped flat terrain during execution stage to accommodate the ISPS units based on the Hydraulics. Therefore partial cutting/filling will be based on Successful tenderers design. Hence, at this stage, the tenderers are requested to make individual site visit and bid as per the site requirements.
85	Volume - 2 / Section - 7 Part - 1, Part 1 - 10 # 14 of 1349	6. Vakil Garden 3 MLD ISPS: 2. The site shall be filled up to the FGL (approximately 2 to 3 m) with approved soil 7. FGL +844.750m 8. HFL +844.000 m	As per tender topo dwg No - 8.TN-KWSDRP-WBS3-CV-3012 of volume -4 the average ground level is varies from 850 to 851 which is above the HFL Hence 2 to 3m filling is not envisaged for Vakil Garden 3 MLD ISPS Please confirm	The requirement shall be as mentioned in the tender document.
86	Volume - 2 / Section - 7 Part - 1, Part 1 - 5 # 9 of 1349	Scope of Work for Works-A All preparatory work including clearing, levelling of site, site grading, formation of Finished Ground Level (FGL), construction of internal roads, all around compound wall etc., excavation, dewatering as required and disposal of all surplus earth to a suitable location as specified/directed by Engineer.	Please provide the disposal location and lead distance for disposal of the surplus and unserviceable earth/debris to outside the plant premises.	The tenderers are requested to make individual site visit and bid as per the site requirements.

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
87	Volume - 2 / Section - 7 Part - 1 & Part - 11, Part 1 - 8 # 11 of 1349 & Part 11 - 12 # 842 of 1349	Additional Scope Details for Civil Works under Works – A & Buildings and Structures 3....The FGL shall be at least 0.75m above the HFL for all sites. & 45..... The difference between HFL and FGL shall be 1.0m.	Both the clauses are Contradcting. We presume that, The FGL shall be 0.75m above the HFL Please confirm	The FGL shall be 0.75m above the HFL.
88	Vol 2 - Sec -7 of Vol 1, Part 1-7 # 11/1349	Additional Scope Details for Civil Works under Works – A 3. The undulating ground shall be properly graded up to the site's Finished Ground Level (FGL) for the WwTP and TSPS sites. The FGL shall be at least 0.75m above the HFL for all sites. Wherever HFL does not exist, the site shall be evenly graded with respect to the FGL.	The FGL of the WwTP&TSPS Site shall be considered at HFL itself. Please confirm.	Tender condition prevails.
89	Vol 2 - Sec -7 of Vol 1, Part 1-12 # 16/1349	Scope of Work for Works – B Any crossing of the gravity sewer lines & pumping mains across National Highway, State Highway, Heavy traffic roads, and Railways shall be carried out with trenchless technology and with prior approval from the concerned authority in accordance with all applicable laws, regulations, and standards complete.	Kindly provide the details of major road /railway crossings using trenchless method	Post award of the Contract, Trenchless locations shall be shown to selected Bidder
90	Vol 2 - Sec -7 of Vol 2, Part 5-10 # 98/1349	Design Requirements All channels carrying process liquid shall be fully covered with solid non-skid GRP cover plates (not grating) designed for human traffic live loads at a minimum and heavy vehicle live load wherever the channel crosses traffic paths.	Process liquid channel shall be fully covered with either RCC Precast slab / GRP cover Plates. Please confirm	The requirement shall be as mentioned in the tender document.
91	Volume - 2 / Section - 7Part - 1, Part 5 - 78#166/1349&Part 11-11#831/1349	TSPS & WwTPs Design/Sizing Criteria&Design Requirements ELECTRICAL SUB-STATION BUILDINGADMIN BUILDING F17INCLUDES PLC SCADA,LABORATORYMOC of Structure-RCC Framed Structure - M30 &All liquid retaining reinforced concrete structures, concrete shall be of a minimum M30 grade and buildings, shall be of a minimum M25 grade (Footings, Plinth Beams, Columns, Slab and beams, .	Both the clauses are Contradcting, we presume that, the minimum grade of concrete for Building shall be M25 as per Part 11-11, Cl.no.1.16 (831 / 1349)Please confirm.	Please refer CI 1.16 of part 11, volume 2 section7. All liquid retaining reinforced concrete structures, concrete shall be of a minimum M30 grade and buildings, shall be of a minimum M25.
92	Vol 2 - Sec -7 of Vol 2, Part 5-10 # 98/1349 & Part 11- 22 # 842/1349	Design Requirements & Buildings and Structures All concrete structures in contact with sewage and/or sludge shall be provided with full interior corrosion protection linings and/or coatings; this shall applies to all concrete structures in contact with any type of sewage and/or sludge anywhere in the plant including but not limited to complete works of TSPS, Inlet works, Anaerobic zone, Anoxic zone, Aerobic zone, Clarifiers, Sludge storage tanks, Channels etc., & 44.All concrete structures in contact with sewage and/or sludge shall be provided with full interior corrosion protection linings and/or coatings of appropriate material and thickness to be approved by the Employer. For Aeration Basins, interior lining shall extend from the top of the wall down to 1.0 meter below the lowest operating water level.	We shall follow the Interior Corrosion linings for all concrete Structures in contact with sewage / sludge based on Civil Technical specification Part 11-22 clause 1.22, Pg 842/1349 Buildings and structure.	The extent of Interior Corrosion linings for all concrete Structures in contact with sewage / sludge shall be as defined in Part 5, Volume 2/Section 7 of the tender document. However, the specification of the Corrosion linings material shall be as specified in the Part 11 of the tender document.

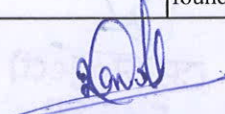
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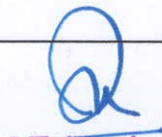
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
93	Vol 2 - Sec -7 of Vol 2, Part 5-10 # 98/1349	Design Requirements • Complete chlorine contact tank including its free board and its inlet & outlet channel shall be provided with White/Sky Blue porcelain - like finish free from any pits or recesses to avoid accumulation of bacteria and dirt, else which might hinder to achieve desired outlet fecal coliform. • Complete disc filtration tank including its free board and its inlet & outlet channel shall be provided with White/Sky Blue porcelain - like finish free from any pits or recesses to avoid accumulation of bacteria and dirt, else which might hinder to achieve desired outlet fecal coliform.	Please elaborate the specific White/Sky Blue porcelain requirement like thickness etc.,.	White/Sky Blue porcelain tiles shall be laid in vitrified floor tiles with thickness 9-10 mm in different sizes with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/m ² including grouting the joints with white cement and matching pigments etc., complete
94	Vol 2 - Sec -7 of Vol 2, Part 5-7 # 95/1349	Design of Plant Layout • Contractor shall provide bird eye view of entire plant by constructing viewing area above admin building. Further, contractor shall ensure that elevator of admin building shall terminate at bird eye view area.	Kindly elaborate the requirement & specification for viewing area like, surface area, type of cover ..etc	The requirement shall be as defined in the tender document. Accordingly the Contractor shall provide bird eye view of entire plant by constructing viewing area above admin building. Further, contractor shall ensure that elevator of admin building shall terminate at bird eye view area.
95	Vol 2 - Sec -7 of Vol 2, Part 5-78 # 166/1349 & Part 5- 105 # 193/1349	TSPS & WwTPs Design/Sizing Criteria ADMIN BUILDING INCLUDES PLC SCADA, LABORATORY Number of Floors - G+2	We presume that, the admin building number floor would be G+1. Please confirm.	The requirement shall be as mentioned in the tender document.
96	Vol 2 - Sec -7 of Vol 2, Part 11-9 # 829/1349	Design Criteria for Underground or Partly Underground Liquid Retaining Structures (vi) Structures shall be designed for uplift in empty conditions with the water table considered at FGL.	Please allow to design for uplift in empty condition with ground water table as per soil investigation report.	Refer cl 1.14 of part 11, volume 2, section 7, Structures shall be designed for uplift in empty conditions with the water table considered at FGL.
97	Vol 2 - Sec -7 of Vol 2, Part 11-25 # 845/1349	Cable and Pipe work Trenches Cable and pipe work trenches shall generally be constructed in reinforced concrete. Trenches within the buildings or Plant areas shall be covered with M20 precast R.C.C covers. The trenches shall be suitably sloped to drain rain water. All uncovered openings shall be protected with hand railing	We presume that, cable shall be laid in buried condition at outside the building. Please confirm.	Tenderer shall refer Volume 2, Section 7, Part 12, cl. No. 12.5.19-f for cable installation
98	Vol 2 - Sec -7 of Vol , Part 11-10 # 830/1349	Foundations (i) The minimum depth of foundations for all structures, equipment, buildings, and frame foundations and load-bearing walls shall be as per IS 1904, but in any case, this shall not be less than 1.0 meter in the original soil.	We presume this clause is not applicable for the site which involve filling and ground improvement. In such sites which requires a site filling the foundation will be kept 1m minimum from FGL after carrying out the necessary ground improvement like stone column etc., Please confirm.	After making necessary ground improvements, approved geotechnical recommendations to be followed.
99	Vol 2 - Sec -7 of Vol 2, Part 11-27 # 847/1349	Non-Destructive Testing of RCC Structures Non-Destructive Testing (NDT) shall be carried out as per the latest IS: 13311 codes as per the instruction given by Employer.	Since all the Wwtp & TSPS will coming under new construction, we presume NDT of RCC structures is not applicable in this Tender. Please confirm	As per Cl 1.32 of part 11, volume 2 section 7, in case if there is any distress in concrete during the execution, Engineer can take decision to go for NDT on the RCC construction before taking any action. Contractor shall conduct NDT tests at his own cost.
100	Vol 2 - Sec -7 of Vol 2, Part 11-25#845/1349&Part 11-33853/1349	Precast Compound Wall and Gate&SKETCH - 1 Compound wall shall consist of RC precast slab panels (M25) with minimum 60mm thickness BWSSB logo written in both Kannada and English Languages RC post at regular intervals including plinth beam as supports for the panels and necessary RC foundation.....&SKETCH - 1	We presume that, 60m thickness as in specification is a Typo error and the precast panels thickness shall be 60mm as per Sketch -1. Please confirm.	To be read as 60mm.


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
101	Vol 2 - Sec -7 of Vol 2, Part 5-7 # 95/1349 & Part 11- 24 844/1349	Design of Plant Layout & Roadways, Pathways & Hard standings Minimum 750mm of paved walkway shall be provided on either side of road which shall be 300mm above the road surface. Contractor shall propose storm drain below this walkway. & All roads shall be designed and constructed as per the specifications and as per site requirements. Bidder shall provide minimum 3.5 m wide internal roads with 1.50m shoulder on one side, which shall be utilised for future expansion of the internal road and	The bidder shall follow the Specification for road & storm water drain as per Vol 2, Section 7- Part-11 Civil Technical Specification Please confirm.	Refer cl 1.23 of part 11, volume 2, section 7.
102	Vol 2 - Sec -7 of Vol 2, Part 11-11 831/1369	Design Requirements Cement used shall be BIS certified. Sulphate resistant cement shall be used for all liquid retaining structures and shall confirm to IS: 12330.	We presume, Ordinary Portland cement shall be used for all structures except Liquid retaining structures. Please confirm	Ordinary Portland cement shall be used for all structures except Liquid retaining structures. Sulphate resistant cement shall be used for all liquid retaining structures
103	General	Pile foundation	We presume that, reinforcement for pile foundation shall be HYSD Fe 500 if applicable	Refer cl 1.16 of part 11, volume 2, section 7, For reinforced concrete structures, reinforcement shall be HYSD-CRS (Corrosion Resistant Steel) of Grade Fe 500.
104	General	Pile foundation	We presume, Ordinary Portland cement shall be used for Pile foundation if applicable. Please confirm	Ordinary Portland cement shall be used for Pile Foundations.
105	Volume - 4	TOPOGRAPHICAL SURVEY LAYOUT FOR PROPOSED WwTP & ISPS DWG.NO-TN-KWSDRP-WBS3-CV-3008 DWG.NO-TN-KWSDRP-WBS3-CV-3009 DWG.NO-TN-KWSDRP-WBS3-CV-3010 DWG.NO-TN-KWSDRP-WBS3-CV-3011 DWG.NO-TN-KWSDRP-WBS3-CV-3012 DWG.NO-TN-KWSDRP-WBS3-CV-3013	Kindly provide AutoCAD Drawing format of all drawings.	Refer Addendum-1
106	Part 12 PARTICULAR ELECTRICAL PLANT REQUIREMENTS Volume-2, Part-12-Page-2	Power Supply Arrangement	WWTP & TSPS / ISPS - 11kV (HT) The bidder assumes the scope starts from the 11 kV ICOG panels. The incoming cable shall be in the scope of the owner. Also separate power supply will be provided for each of the WWTP and ISPS by the owner. Please confirm.	Tenderer scope starts with 11kV cable terminations at Utility Metering Panel, 11kV cable jointing kits, 11kV cable from Utility metering panel to 11kV outdoor VCB ICOG panel and all further plant works as per scope demarcation mentioned in Vol 2/ Sec 7, Part 12, Cl. 12.3 and Vol 4, Dwg. No.TN-KWSDRP-WBS3-EL-4001, 4002, 4004, 4005 Tenderer to refer the Vol 4, Dwg. No.TN-KWSDRP-WBS3-EL-4001 for the power supply arrangement to TSPS.
107	Part 12 PARTICULAR ELECTRICAL PLANT REQUIREMENTS Volume-2, Part-12-Page-2	Power Supply Arrangement WWTP: The outgoings of the 11kV indoor panel for plant distribution shall feed • 2 Nos. of 11/0.433kV Distribution Transformers for WWTP plant loads. • 2 Nos. of 11/0.433kV Distribution Transformers for Process Air Blowers loads.	The tender documents considers 4 units of 11/0.433KV transformers. The bidder assumes the transformer size and qty can be revised based on the process design load. Please confirm	Tender Conditions prevails.
108	Part 12 PARTICULAR ELECTRICAL PLANT REQUIREMENTS Volume-2, Part-12-Page-7	System Protection (i) Motors upto 11kW Motor Protection Circuit Breaker (MPCB) (ii) Motors 15kW up to 75kW MCCB (iii) Motors above 75kW ACB/MCCB	The bidder shall consider using a 400A MCCB for current rating up to 400A, and an ACB for current rating above 400A. Please confirm.	Tenderer to refer Vol 2/ Sec 7, Part 12, Cl. 12.4.11 for MCCB/ACB selection based on feeder ratings.Tender Conditions Prevails.
109	Part 12 PARTICULAR ELECTRICAL PLANT REQUIREMENTS Volume-2, Part-12-Page-9	Switchgear Instruments 415V Motor Starter Feeders (i)DOL Starters for motor feeders less than or equal to 5.5kW (ii) Star-Delta Starters for motor feeders above 5.5kW and up to 30kW (iii) Line/Neutral Soft Starters for motor feeders above 30kW	The bidder proposes to consider the selection of motor starters as follows: Direct On-Line (DOL) starters for motors less than or equal to 55 kW. Soft starters for motors greater than or equal to 55 kW. VFDs shall be chosen based on process requirements. Please confirm	Tender Conditions prevails

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
110	Part 6 GENERAL ELECTRICAL REQUIREMENTS Volume-2, Part-6-Page-20	Circuit Breaker 10% spare feeders with at least one for each type of highest rating shall be provided in each switchgear.	In SLD no spare feeder provided. Please confirm	Tenderer to refer all the drawings under Volume 4. Refer Dwg. No. TN-KWSDRP-WBS3-EL-4004, TN-KWSDRP-WBS3-EL-4005 for details.
111	Part 6 GENERAL ELECTRICAL REQUIREMENTS Volume-2, Part-6-Page-34 & Part-12-Page-7	Air Circuit Breaker (ACB) Air circuit breaker shall be selected for feeders for load current more than 630A	In the ACB schedule, Clause No. 6.5.3 mentions that Air circuit breaker shall be selected for feeders for load current more than 630A, but Clause No. 12.4.6 Motors above 75kW ACB/MCCB. Please clarify which one is to be followed?	Tenderer to note that ACB selection criteria is already specified in cl. 6.5.3. Also MCCB/ACB selection based on feeder ratings is also specified under Vol 2/ Sec 7, Part 12, Cl. 12.4.11.Tender Conditions Prevails.
112	Part 6 GENERAL ELECTRICAL REQUIREMENTS Volume-2, Part 6-Page-35 & Part 13-Page-59	Intelligent Motor Protection Relay , DWG-TN-KWSDRP-WBS3-IC-5003 & Typical Drive Control Philosophy to be provided on a minimum shall be as follows: The intelligent motor controller for 3-phase AC induction motors combining the two classical functions of motor protection and motor management in a single device plus offering diagnostic and fieldbus communication.	Bidder assumes that protocol based fieldbus communication shall be provided between the PLC and MCC. Please confirm.	The Bidder may please be noted that the standard known protocols shall be used for any third party communication interface to the Plant PLC / SCADA system as specified under clause no.13.27, Part 13.
113	Part 12 PARTICULAR ELECTRICAL PLANT REQUIREMENTS Volume-2, Part 12-Page-9	415V PCC/MCC & 415V DG PCC shall be Single front, floor standing, top cable entry, sheet steel enclosed with IP 54 Degree of Protection	The bidder shall consider double front type PCC/MCC panel. Please confirm.	Tender conditions prevails. Double Front construction criteria is already specified under cl. 12.4.11.Tender Conditions Prevails.
114	General	Diesel Engine	Please clarify the DG requirements for the lift pumping station and specify which loads need to be connected to it.	DG set is not required for Lift Pumping Stations. Tenderer to refer Vol 2/ Sec 7, Part 12, Cl. 12.4.10 for DG requirements.
115	General	Cable tray	The bidder presumes that all external cables shall be directly buried, and cables within the building shall be laid in cable trays. Please confirm.	Tenderer shall refer Volume 2, Section 7, Part 12, cl. No. 12.4.19-f for cable installation. Tender Conditions Prevails.
116	Volume-2, 1032 of 1349	I/O Modules In addition to the above, provision shall be made for future expansion of additional 30% extra I/O modules of the installed capacity in the panel.	Bidder proposes to consider 20% extra I/O modules of the installed capacity in the panel. Please confirm.	Not Acceptable, the Tender Condition Prevails for which please refer Clause No.13.27, Part-13 in Volume-2 of the Tender Document.
117	Volume-2, 1013 of 1349	Laboratory Information Management software (LIMS)	Please provide the details of LIMS Software	For details of LIMS software, please refer clause no. 13.23.A, Part-13 in Volume-2 of the tender document.
118	Volume-2, 1038 of 1349	Typical Drive Control Philosophy table	Bidder are free to choose the control philosophy for drives and the as per process design requirement	Not Acceptable.The minimum PLC Input & Output (type & number of IOs) shall be followed for each final control element of WwTP, ISPSs such as drives, Actuators, Breakers & and Transformers etc.. as per Clause No.13.29: Typical Drive Control Philosophy. Hence, the Tender Conditions Prevails.
119	Volume-2, 982 of 1349	The scope of instrumentation, control and automation (ICA) works for Sewage Treatment Plant and ISPS's under this contract shall comprise of the design, manufacture, supply, programming and configuration, off site testing, delivery to site, installation and erection, testing, commissioning, setting to work and provision of documentation for a complete instrumentation, control and automation system including the interfaces required to provide monitoring and control for a safe and efficient operation of the plant locally as well as remote monitoring from the centralized SCADA Center to be established under contract package MIS-2 SCADA center at SHIMSHA Bhavan. The SCADA system shall be designed and configured to transmit complete WwTP and ISPS operational data (data transfer in bulk) to the centralized SCADA center MIS-2 as indicated above.	Bidder understand that STP operational datas shall be shared through GSM/GRPS from SCADA system at control room Bommanahalli to BWSSB MIS-2 SCADA center at SHIMSHA Bhavan. Hardware and software required for BWSSB MIS-2 SCADA center at SHIMSHA Bhavan is not in bidder scope, Please confirm.	Not Acceptable.The Hardwares and softwares required for BWSSB MIS-2 SCADA center at SHIMSHA Bhavan is under Bidder scope for which please refer minimum scope of ICA work point nos.8) & 9)and 13) & 14) as per Clause No.13.2 in volume-2 of the tender document pertaining to wireless data integration to MIS-2 SCADA from WwTP, ISPSs. Also, please refer the SCADA CONTROL SYSTEM ARCHITECTURE DRAWING FOR WwTP (DWG Nos. TN-KWSDRP-WBS3-IC-5003, TN-KWSDRP-WBS3-IC-5004,TN-KWSDRP-WBS3-IC-5005,TN-KWSDRP-WBS3-IC-5006)

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
120	Volume 2, PART 16, 1145 / 1349	Operation and Maintenance Requirements During the Operation Service Period, the Contractor shall collect, transport, and dispose of the screenings, grit, and dewatered sludge cake in full compliance with all applicable laws, rules, and regulations.	1. We understand the Contractors scope limited to transportation of Dewatered sludge to the disposal land identified by the employer which is in 15 - 20 Km radius. 2. We understand that contractors scope is limited to only Loading, transportation and unloading of the dewatered sludge at the allotted area. 3. We understand that tipping fee, statutory charges if any and any other charges applicable at disposal site shall be borne by BWSSB..	The requirement shall be as mentioned in the tender document.
121	Volume 2, PART-1, 10 / 1349	Scope of Work for Works-A Transportation and disposal of screening, grit and dewatered sludge cake as specified in Employer's Requirements. BWSSB will provide the land for disposal of sludge in the vicinity 15 to 20 kms radius of each WwTP(s).		
122	Volume 1, SPECIAL CONDITIONS OF CONTRACT, 148 / 234	Security Deposit After successful commissioning and guarantee tests of the Treatment Plant and taking over by the Employer, within 14 days the Contractor shall submit to the Employer security deposit for the O&M Contract in the form of an unconditional Bank Guarantee in the amount as stated in the Contract Data, payable to the Employer who is responsible for the O&M Contract. Such guarantee shall conform to the requirements set forth in the preceding two paragraphs, and shall be valid up to 30 days beyond expiry of the Operation and Maintenance Period."	We request the Employer to accept PBG for Annual O&M contract price for the value of 5% valid for 1 years and the same shall be renewed annually for the respective year's O&M contract price. Please confirm.	Not Acceptable, Tender Conditions Prevails
123	Volume 2, PART 16, 1146 / 1349	Minimum Number of Staff per Designation and Qualifications Requirements during Operation Service Period for WwTPs/TSPS/ISPSs The above specified requirement is Minimum for one WwTP, Contractor shall provide specified minimum staff at WwTP location. Further, Contractor shall arrange extra work force, as and when required, so as to smoothly run the operation and maintenance including preventive maintenance, repairs etc. and general cleanliness of the installations.	Please confirm wheather the provided manpower is for one plant (or) all the plant together	The requirement shall be as mentioned in the tender document. Also follow the notes indicated in same clause. Tenderer may consider one Plant Manager for 2 WwTPs including TSPS & ISPS. Other staff deployment shall be as per tender requirement.
124	Volume 1, SPECIAL CONDITIONS OF CONTRACT, 167 / 234	Retention Amount Retention Amount- The retention amount at 5% of each RA bills will be deducted. 50% of retention amount will be released after successful completion, commissioning and handing over plant. Balance 50% will be released after completion of Defects Liability Period (DLP). This balance 50% may also be released on submission of equivalent amount of BG at the discretion of Employer.	We understand that there is no Retention Amount for O&M period. Please confirm.	Retension amount is not applicable for O & M period
125	Volume 1, Appendix 6 – Functional Guarantees, 218 / 234	Power Consumption: Equal to the estimated cost of the excess energy requirements for Operating and Maintaining the STP, Pumping stations and related facilities at the rated capacities for a period of 10 (Ten) years after completion, based on the maximum consumption provided by the contractor under the relevant technical schedule in Section 7, Specifications and current rates charged by the power supply company for electricity consumed by the plant and facilities, discounted to net present value at the rate of 8 % per annum.	We would like to highlight that plant will be operated with wide range of design envelope as the sewage load fluctuates widely . (a) Hence it would be appropriate if the power consumption during the O&M is calculated on Annual basis and any increase in power consumption in a year at the plant above the functional gurantee value will be borne by thr contractor which shall be calculated on annual basis. (b)Any savings calculated on the annual basis shall carry forward to the subsequent year. (c)Any savings calculated on annual basis shall be shared between employer and contractor at the rate of 50%:50%.	a) Power consumption guarantee will be calculated on monthly basis as tender conditions. b) Not Acceptable c) Not Applicable
126	Volume 1, Appendix 6 – Functional Guarantees, 218 / 234	Chemicals and material Consumption: Equal to the estimated cost of the excess chemicals and materials requirements for Operating and Maintaining the STP and related facilities at the rated capacities for a period of 10 (Ten) years after completion, based on the maximum consumption provided by the contractor under the relevant technical schedule in Section-7, Specifications and current rates charged by the Central stores of BWSSB shall be considered for excess consumed chemicals and same shall be deducted in the monthly O & M bills	Exceeding chemical consumption than guarantee will be borne by the contractor. Hence we request employer to waive off this liquidated damages for excess chemical consumption	Not Acceptable, Tender Conditions Prevails

Team Leader

CE (Project)
BWSSB

Response to Pre-Bid Queries																												
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)																												
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																								
127	Volume 1, Appendix 3 - Price Escalation, 212 / 234	B) Price Adjustment Formula for O&M Period of the Contract Weighting and Adjustment Factors: The weightings (coefficients) for each of the factors of cost, shall be as follows: For O&M Contract <table><tr><th>Co-efficient</th><th>Description of Co-efficient</th><th>Range of Weightings%</th><th>Weightings% "Tenderers to Specify below"</th></tr><tr><td>(a)</td><td>Fixed Co-efficient</td><td>20</td><td>20</td></tr><tr><td>(b)</td><td>Labour</td><td>20 - 30</td><td></td></tr><tr><td>(c)</td><td>Chemicals</td><td>40 - 50</td><td></td></tr><tr><td>(d)</td><td>Fuel</td><td>10</td><td>10</td></tr><tr><td></td><td>Total</td><td></td><td>100</td></tr></table>	Co-efficient	Description of Co-efficient	Range of Weightings%	Weightings% "Tenderers to Specify below"	(a)	Fixed Co-efficient	20	20	(b)	Labour	20 - 30		(c)	Chemicals	40 - 50		(d)	Fuel	10	10		Total		100	We request the Employer to reconsider and reduce the Fixed co-efficient weightage from 20% to 10%, since all the cost elements are subject to increase YOY.	Not Acceptable, Tender Conditions Prevails
Co-efficient	Description of Co-efficient	Range of Weightings%	Weightings% "Tenderers to Specify below"																									
(a)	Fixed Co-efficient	20	20																									
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(c)	Chemicals	40 - 50																										
(d)	Fuel	10	10																									
	Total		100																									
128	Volume 1, Appendix 6 – Functional Guarantees, 217 / 234	Effluent Quality: Failure to achieve the specified effluent quality requirement at the outlet of the chlorine contact tank during the O&M Period. Performance Damages as Percent of the O & M Monthly payment of each STP. For each STP that fails to pass the Tests during O & M period for each additional “quantum” (as defined below) of the effluent quality parameter, or part thereof, beyond the specified maximum concentration <table><tr><th>Parameter of (Reuse) O & M Monthly payment</th><th>For additional each part parameter or of</th></tr><tr><td>3%</td><td>1 mg/L, BOD</td></tr><tr><td>2%</td><td>0.5NTU, Turbidity</td></tr><tr><td>1%</td><td>10 mg/L, COD</td></tr><tr><td>1%</td><td>1 mg/L, TN</td></tr><tr><td>1%</td><td>0.2 mg/L, TP</td></tr><tr><td>2%</td><td>10MPN/100mL Fecal coliform</td></tr></table>	Parameter of (Reuse) O & M Monthly payment	For additional each part parameter or of	3%	1 mg/L, BOD	2%	0.5NTU, Turbidity	1%	10 mg/L, COD	1%	1 mg/L, TN	1%	0.2 mg/L, TP	2%	10MPN/100mL Fecal coliform	As the penalties for not meeting the functional guarantees are very exorbitant, we request BWSSB, to reduce performance damages to 1 % for each parameter, , as offered to us for Bellandur and previous K & C Valley Tender.	Not Acceptable, Tender Conditions Prevails										
Parameter of (Reuse) O & M Monthly payment	For additional each part parameter or of																											
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2%	10MPN/100mL Fecal coliform																											
129	Volume 1, Appendix 7 – Functional Guarantees for Reuse, 220 / 234	Effluent Quality: Failure to achieve the specified effluent quality requirement at the outlet of the GLR during the O&M Period Performance Damages as Percent of the O & M Monthly payment of each STP. For each STP that fails to pass the Tests during O & M period for each additional “quantum” (as defined below) of the effluent quality parameter, or part thereof, beyond the specified maximum concentration <table><tr><th>Parameter of (Reuse) O & M Monthly payment</th><th>For additional each part parameter or of</th></tr><tr><td>3%</td><td>1 mg/L, BOD</td></tr><tr><td>2%</td><td>0.5NTU, Turbidity</td></tr><tr><td>1%</td><td>10 mg/L, COD</td></tr><tr><td>1%</td><td>1 mg/L, TN</td></tr><tr><td>1%</td><td>0.2 mg/L, TP</td></tr><tr><td>2%</td><td>10MPN/100mL Fecal coliform</td></tr></table>	Parameter of (Reuse) O & M Monthly payment	For additional each part parameter or of	3%	1 mg/L, BOD	2%	0.5NTU, Turbidity	1%	10 mg/L, COD	1%	1 mg/L, TN	1%	0.2 mg/L, TP	2%	10MPN/100mL Fecal coliform	As the penalties for not meeting the functional guarantees are very exorbitant, we request BWSSB, to reduce performance damages to 1 % for each parameter, , as offered to us for Bellandur and previous K & C Valley Tender.	Not Acceptable, Tender Conditions Prevails										
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Team Leader
PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB

CE (Project)
BWSSB

Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply															
130	General		Necessary clause provisions are requested to include as compensation for the following. - Adverse change of Raw Sewage Quality. - Reduction of Raw Sewage quantity from the required level. - Non availability of entire quantity of raw sewage water (Full dry condition)	The requirement shall be as mentioned in the tender document.															
131	General		Any increase or new introduction of any taxes and duties & other levies shall be reimbursed at actual Kindly accept and confirm.	Refer Addendum-1															
132	General		We understand that the Operation & Maintenance of 10 years is only for the Part A of the Contract. Please Confirm	The requirement of O&M is for Works-A only.															
133	Volume 2, 168 / 1349	TSPS & WwTPs Design/Sizing Criteria b) WwTP at Anjanapura <table><tr><th>SLUDGE QUALITY REQUIREMENTS (AFTER CENTRIFUGE)</th><th></th><th></th></tr><tr><td>Sludge Quality</td><td>-</td><td>Digested dewatered sludge</td></tr><tr><td>Minimum Solid Concentration in Dewatered Sludge</td><td>%</td><td>25</td></tr></table>	SLUDGE QUALITY REQUIREMENTS (AFTER CENTRIFUGE)			Sludge Quality	-	Digested dewatered sludge	Minimum Solid Concentration in Dewatered Sludge	%	25	We request the employer to revise the Minimum Solid Concentration in Dewatered Sludge at Anjanapura as 20% - 22%. We would like to highlight 20% - 22% solid concentration will consume optimum chemicals and it shall be truckable without any dripping water.	The minimum solid concentration in digested sludge shall be considered as 22%. For all un-digested sludge it remains 20% as per tender clause.						
SLUDGE QUALITY REQUIREMENTS (AFTER CENTRIFUGE)																			
Sludge Quality	-	Digested dewatered sludge																	
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134	Volume 1, Appendix 6 – Functional Guarantees, 217 / 234	Effluent Quality Performance Damages as Percent of the O & M Monthly payment of each STP. For each STP that fails to pass the Tests during O & M period for each additional “quantum” (as defined below) of the effluent quality parameter, or part thereof, beyond the specified maximum concentration <table><tr><th>payment</th><th>parameter</th></tr><tr><td>3%</td><td>2 mg/L, BOD5</td></tr><tr><td>2%</td><td>3mg/L, TSS</td></tr><tr><td>1%</td><td>10 mg/L, COD</td></tr><tr><td>1%</td><td>3 mg/L, TN</td></tr><tr><td>1%</td><td>0.2 mg/L, TP</td></tr><tr><td>2%</td><td>20MPN/100mL Fecal coliform</td></tr></table>	payment	parameter	3%	2 mg/L, BOD5	2%	3mg/L, TSS	1%	10 mg/L, COD	1%	3 mg/L, TN	1%	0.2 mg/L, TP	2%	20MPN/100mL Fecal coliform	We understand the Penalties are leived if the monthly average of daily composite samples (except Fecal Coliform which will be based on grab sample) are not achieved. Please Confirm	The requirement shall be as mentioned in the tender document.	
payment	parameter																		
3%	2 mg/L, BOD5																		
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1%	10 mg/L, COD																		
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135	Volume 1, Appendix 7 – Functional Guarantees for Reuse, 220 / 234	Effluent Quality Performance Damages as Percent of the O & M Monthly payment of each STP. For each STP that fails to pass the Tests during O & M period for each additional “quantum” (as defined below) of the effluent quality parameter, or part thereof, beyond the specified maximum concentration	We understand the Penalties are leived if the monthly average of daily composite samples (except Fecal Coliform which will be based on grab sample) are not achieved. Please Confirm.	The requirement shall be as mentioned in the tender document.															
136	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 8 of 1349	Gravity or Pumped flow <table><tr><th>S.No</th><th colspan="2">Pumping Main</th><th>Diameter (mm)</th><th>Length (m)</th></tr><tr><th></th><th>From</th><th>To</th><th></th><th></th></tr><tr><td>1</td><td>Bora Layout</td><td>To Ridge Machine hole</td><td>200</td><td>1000</td></tr></table> Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.	S.No	Pumping Main		Diameter (mm)	Length (m)		From	To			1	Bora Layout	To Ridge Machine hole	200	1000	Plant inlet flow (Gravity / Pumped) is not mentioned in the tender document. Hence Please specify the plant Inlet flow type whether gravity inlet (or) pressure inlet for Iblur 5 MLD WWTP.	Inlet chamber of the TSPS receives a gravity flow
S.No	Pumping Main		Diameter (mm)	Length (m)															
	From	To																	
1	Bora Layout	To Ridge Machine hole	200	1000															
137	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 8 of 1349	Gravity or Pumped flow <table><tr><th>S.No</th><th colspan="2">Pumping Main</th><th>Diameter (mm)</th><th>Length (m)</th></tr><tr><th></th><th>From</th><th>To</th><th></th><th></th></tr><tr><td>1</td><td>Bora Layout</td><td>To Ridge Machine hole</td><td>200</td><td>1000</td></tr></table> Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.	S.No	Pumping Main		Diameter (mm)	Length (m)		From	To			1	Bora Layout	To Ridge Machine hole	200	1000	Plant inlet flow (Gravity / Pumped) is not mentioned in the tender document. Hence Please specify the plant Inlet flow type whether gravity inlet (or) pressure inlet for U M Kavala 10 MLD WWTP.	Inlet chamber of the TSPS receives a gravity flow
S.No	Pumping Main		Diameter (mm)	Length (m)															
	From	To																	
1	Bora Layout	To Ridge Machine hole	200	1000															

Team Leader

 CE (Project)
 BWSSB

Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																				
138	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 8 of 1349	Gravity or Pumped flow <table><tr><th rowspan="2">S.No</th><th colspan="2">Pumping Main</th><th rowspan="2">Diameter (mm)</th><th rowspan="2">Length (m)</th></tr><tr><th>From</th><th>To</th></tr><tr><td>1</td><td>Bora Layout</td><td>To Ridge Machine hole</td><td>200</td><td>1000</td></tr><tr><td colspan="5">Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.</td></tr></table>	S.No	Pumping Main		Diameter (mm)	Length (m)	From	To	1	Bora Layout	To Ridge Machine hole	200	1000	Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.					Plant inlet flow (Gravity / Pumped) is not mentioned in the tender document. Hence Please specify the plant Inlet flow type whether gravity inlet (or) pressure inlet for Hulimavu 15 MLD WWTP.	Inlet chamber of the TSPS receives a gravity flow			
S.No	Pumping Main			Diameter (mm)	Length (m)																			
	From	To																						
1	Bora Layout	To Ridge Machine hole	200	1000																				
Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.																								
139	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 8 of 1349	Gravity or Pumped flow <table><tr><th rowspan="2">S.No</th><th colspan="2">Pumping Main</th><th rowspan="2">Diameter (mm)</th><th rowspan="2">Length (m)</th></tr><tr><th>From</th><th>To</th></tr><tr><td>1</td><td>Bora Layout</td><td>To Ridge Machine hole</td><td>200</td><td>1000</td></tr><tr><td colspan="5">Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.</td></tr></table>	S.No	Pumping Main		Diameter (mm)	Length (m)	From	To	1	Bora Layout	To Ridge Machine hole	200	1000	Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.					Plant inlet flow (Gravity / Pumped) is not mentioned in the tender document. Hence Please specify the plant Inlet flow type whether gravity inlet (or) pressure inlet for Anjanapura 35 MLD WWTP.	Inlet chamber of the TSPS receives a gravity flow			
S.No	Pumping Main			Diameter (mm)	Length (m)																			
	From	To																						
1	Bora Layout	To Ridge Machine hole	200	1000																				
Notes: 1. Length may be subject to adjustment during Contract based on topographic survey and other factors.																								
140	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 7 of 1349	Distance <table><tr><th>Sl. No.</th><th>Zone</th><th>WwTP Location</th><th>Average Flows (MLD)</th></tr><tr><td>1</td><td>Bommanahalli</td><td>Iblur</td><td>5 MLD</td></tr><tr><td>2</td><td>Bommanahalli</td><td>U M Kaval</td><td>10 MLD</td></tr><tr><td>3</td><td>Bommanahalli</td><td>Hulimavu</td><td>15 MLD</td></tr><tr><td>4</td><td>Bommanahalli</td><td>Anjanapura</td><td>35 MLD</td></tr></table>	Sl. No.	Zone	WwTP Location	Average Flows (MLD)	1	Bommanahalli	Iblur	5 MLD	2	Bommanahalli	U M Kaval	10 MLD	3	Bommanahalli	Hulimavu	15 MLD	4	Bommanahalli	Anjanapura	35 MLD	Kindly provide us the approximate distance from Iblur 5 MLD WWTP to nearby disposal point location. Please Confirm.	Disposal to the water body which is adjacent to WwTP
Sl. No.	Zone	WwTP Location	Average Flows (MLD)																					
1	Bommanahalli	Iblur	5 MLD																					
2	Bommanahalli	U M Kaval	10 MLD																					
3	Bommanahalli	Hulimavu	15 MLD																					
4	Bommanahalli	Anjanapura	35 MLD																					
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Sl. No.	Zone	WwTP Location	Average Flows (MLD)																					
1	Bommanahalli	Iblur	5 MLD																					
2	Bommanahalli	U M Kaval	10 MLD																					
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142	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 7 of 1349	Distance <table><tr><th>Sl. No.</th><th>Zone</th><th>WwTP Location</th><th>Average Flows (MLD)</th></tr><tr><td>1</td><td>Bommanahalli</td><td>Iblur</td><td>5 MLD</td></tr><tr><td>2</td><td>Bommanahalli</td><td>U M Kaval</td><td>10 MLD</td></tr><tr><td>3</td><td>Bommanahalli</td><td>Hulimavu</td><td>15 MLD</td></tr><tr><td>4</td><td>Bommanahalli</td><td>Anjanapura</td><td>35 MLD</td></tr></table>	Sl. No.	Zone	WwTP Location	Average Flows (MLD)	1	Bommanahalli	Iblur	5 MLD	2	Bommanahalli	U M Kaval	10 MLD	3	Bommanahalli	Hulimavu	15 MLD	4	Bommanahalli	Anjanapura	35 MLD	Kindly provide us the approximate distance from Hulimavu 15MLD WWTP to nearby disposal point location. Please Confirm.	Disposal to the water body which is adjacent to WwTP
Sl. No.	Zone	WwTP Location	Average Flows (MLD)																					
1	Bommanahalli	Iblur	5 MLD																					
2	Bommanahalli	U M Kaval	10 MLD																					
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Sl. No.	Zone	WwTP Location	Average Flows (MLD)																					
1	Bommanahalli	Iblur	5 MLD																					
2	Bommanahalli	U M Kaval	10 MLD																					
3	Bommanahalli	Hulimavu	15 MLD																					
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144	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 107 of 1349	- Maximum pipe flow velocity shall be no more than 1.0 m/s for all gravity flow and pump suction lines unless specified otherwise. - Maximum pipe flow velocity shall be no more than 1.5 m/s for all pumped discharge lines unless specified otherwise. - Calculated normal velocity (at 20°C and 1atm) of air piping shall not be more than 16 m/s. - For channels, the maximum velocity shall be no more than 1.0 m/s. - For liquids the maximum velocity through gate opening shall be no more than 0.8 m/s unless specified otherwise.	We recommended Maximum Velocities for Pump suction & discharge shall be considered as follows:1. Pump Suction - 1.5 m/s (max.)2. Pump Discharge - 2.5 m/s (max)Please confirm.	Tender Conditions Prevail																				

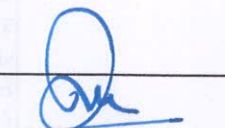
Team Leader

CE (Project)
BWSSB

Response to Pre-Bid Queries																															
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)																															
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																											
145	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 107 of 1349	Velocity Criteria - Maximum pipe flow velocity shall be no more than 1.0 m/s for all gravity flow and pump suction lines unless specified otherwise. - Maximum pipe flow velocity shall be no more than 1.5 m/s for all pumped discharge lines unless specified otherwise. - Calculated normal velocity (at 20°C and 1atm) of air piping shall not be more than 16 m/s. - For channels, the maximum velocity shall be no more than 1.0 m/s. - For liquids the maximum velocity through gate opening shall be no more than 0.8 m/s unless specified otherwise.	Velocity for Process air and Odour piping is not mentioned in the tender document. Hence we presume that pipe sizing velocity criteria shall be considered as follows: 1. Process Air- 20 m/s (max.) 2. Odour Duct- 8 m/s (max.) Please confirm.	Tender Conditions Prevail																											
146	BWSSB_WWTP-TTF_Bommanahali_WBS_III / VOLUME 2 (TECHNICAL SPECIFICATION AND SCHEDULE), 439 of 1349	a) Material of Construction The material of construction of the Combi Unit shall be grade 316L stainless steel and an Odour control system, a Carbon filter shall be FRP Vessel.	We presume that GRP MOC shall be used for Odour control duct piping. Please Confirm.	Not Acceptable. It shall be FRP only as same as main vessel. Tender Conditions prevails.																											
147	General		Genral layout of piping is not given in tender	Minimum requirements of the plant is mentioned in Volume 2. However, for any additional data the tenderers are requested to make individual site visit and bid as per the actual site requirements.																											
148	General		Crossing details is not given in tender (road crossing, nala crossing, river crossing etc.)	Minimum requirements of the plant is mentioned in Volume 2. However, for any additional data the tenderers are requested to make individual site visit and bid as per the actual site requirements.																											
149	General		Zone boundary of proposed area is not given in tender	Minimum requirements of the plant is mentioned in Volume 2. However, for any additional data the tenderers are requested to make individual site visit and bid as per the actual site requirements. Auto CAD format of layout drawing will be shared in Addendum-1																											
150	Volume-2/ Section-7, Part 5 -37 & Page 5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>pH</td><td></td><td>6.5-7.5</td></tr><tr><td>BOD</td><td>mg/L</td><td>350</td></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr><tr><td>TSS</td><td>mg/L</td><td>450</td></tr><tr><td>VSS</td><td>mg/L</td><td>360</td></tr><tr><td>TKN</td><td>mg/L</td><td>70</td></tr><tr><td>NH4-N</td><td>mg/L</td><td>45</td></tr><tr><td>Total Phosphorus</td><td>mg/L</td><td>7</td></tr></table>	Influent Wastewater Characteristics			pH		6.5-7.5	BOD	mg/L	350	COD	mg/L	800	TSS	mg/L	450	VSS	mg/L	360	TKN	mg/L	70	NH4-N	mg/L	45	Total Phosphorus	mg/L	7	As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Kindly confirm	The design influent parameters requirement shall be as defined Part 5, Volume 2 / Section 7. "TSPS & WwTPs Design / Sizing Criteria".
Influent Wastewater Characteristics																															
pH		6.5-7.5																													
BOD	mg/L	350																													
COD	mg/L	800																													
TSS	mg/L	450																													
VSS	mg/L	360																													
TKN	mg/L	70																													
NH4-N	mg/L	45																													
Total Phosphorus	mg/L	7																													
151	Volume-2/ Section-7, Part 5 -37 & Page 5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr></table>	Influent Wastewater Characteristics			COD	mg/L	800	We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being non- biodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at the Works. Kindly confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.																					
Influent Wastewater Characteristics																															
COD	mg/L	800																													



Team Leader
PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB



CE (Project)
BWSSB

Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
152	Volume-1 / Page 17 of 234	Construction Experience- Pipeline The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 years as on date of bid submission involving minimum length of 27 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. As per the CPHEEO and prevailing in all states, uPVC pipes are being used upto 250 mm diameter. DWC pipes and CI Pipes are being used beyond 250 mm diameter in sewer networks. Hence, we request you to consider uPVC and CI experience also in addition to DWC/RCC/DI construction of pipeline. Please confirm.	For experience purpose CI pipeline construction will be considered. Refer Addendum-1.
153	Volume-1 / Page 17 of 234	(vi) Construction Experience Trenchless Works The tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia and above MS casing pipe of minimum 100 meters in one year during the last 5 years as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
154	Volume-1 / Page 17 of 234	(iv) Experience in Power Generating Facility The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of at least One (1) No. Waste water Treatment Plant of 28 MLD capacity with power Generating Facility of minimum 480 kw per hour from Anaerobic Digestion and in operation for One year in last five years as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
155	Volume-1 / Page 16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPs The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 52 MLD capacity and above or Two (2) Nos. of Waste Water Treatment Plants of minimum 26 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal MPN/100 ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for the secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified—excluding fecal coliform: •BOD ≤ 10 mg/L •COD ≤ 50 mg/L •TSS ≤ 10 mg/L •Total Nitrogen (TN) ≤ 10 mg/L •Total Phosphorus (TP) ≤ 1 mg/L Kindly confirm	Refer Addendum-1

Team Leader

CE (Project)
BWSSB

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
156	Volume-1 / Page 14 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 52 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Kindly confirm.	Tender Conditions Prevails
157	Volume-2/ Section-7, Part 5 - 64 & Part 5-90	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted	Tender conditions Prevail.
158	Volume-2/ Section-7, Part 5 -64 Volume-2/ Section-7, Part 5-90	HRT at average flow: 24 Hrs. HRT at average flow: 16.8 Hrs.	Hydraulic Retention Time (HRT) is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Kindly confirm.	Tender conditions Prevail.
159	Volume-2/ Section-7, Part 5 -66 & Part 5-91	Maximum Decanter Weir loading rate: 120 m ³ /h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 m ³ /h/m (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Kindly confirm.	Tender conditions Prevail.
160	Volume-2/ Section-7, Part 8 -100	Decanters (For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standard specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
161	Volume-2/ Section-7, Part 8 -100	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
162	Volume-2/ Section-7, Part 5 - 67 & Part 5-92	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document—Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self- cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Kindly confirm.	Tender Conditions Prevails.
163	Volume-2/ Section-7, Part 8 -83 to Part 8 -186 Volume-2/ Section-7, Part 8 -101 to Part 8 -103	8.18Aeration system with allied Equipments 8.18.1Tubular Type Diffusers & 8.18.15.2Diffuser system for IFAS 8.18.15.3Type of Diffuser System 8.18.15.4Diffuser Elements 8.18.15.5Testing for Diffuser system 8.18.15.6Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Kindly confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted. Refer Addendum-1

Team Leader

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																																	
164	Volume-2/ Section-7, Part 8 - 91	<table><tr><th>Si.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Si.no.	Description	Material of Construction	f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.																											
Si.no.	Description	Material of Construction																																			
f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool																																			
165	Volume-2/ Section-7, Part 8 - 188	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yucheon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur, 10 Komaghatta, 13 MLD Byrathi Kanne. Therefore, we assume that the tenderer can propose M/s. Yucheon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																																	
166	Volume-2/ Section-7, Part 5 -70 & Part 5-94	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Kindly confirm.	Tender Conditions Prevails.																																	
167	Volume-2/ Section-7, Part 1 -12 Volume-2/ Section-7, Part 5-37 Volume-2/ Section-7, Part 5-79	<table><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD₅ at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></table>	Parameters	Unit	Value	TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE			pH - Instantaneous range	-	6.5-8.0	BOD ₅ at 20°C - Maximum monthly average	mg/L	10	COD - Maximum monthly average	mg/L	50	TSS - Maximum monthly average	mg/L	10	TN - Maximum monthly average	mg/L	10	Total Phosphorus - Maximum monthly average	mg/L	1	Residual Chlorine - Instantaneous	mg/L	1	Fecal Coliform – Maximum Monthly average	MPN/100 mL	100	Fecal Coliform – Ceiling Limit (in any day)	MPN/100 mL	230	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
Parameters	Unit	Value																																			
TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE																																					
pH - Instantaneous range	-	6.5-8.0																																			
BOD ₅ at 20°C - Maximum monthly average	mg/L	10																																			
COD - Maximum monthly average	mg/L	50																																			
TSS - Maximum monthly average	mg/L	10																																			
TN - Maximum monthly average	mg/L	10																																			
Total Phosphorus - Maximum monthly average	mg/L	1																																			
Residual Chlorine - Instantaneous	mg/L	1																																			
Fecal Coliform – Maximum Monthly average	MPN/100 mL	100																																			
Fecal Coliform – Ceiling Limit (in any day)	MPN/100 mL	230																																			
168	Volume-2/ Section-7, Part 8 -165	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																																	
169	Volume-2/ Section-7, Part 8 - 166	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10 MLD Komaghatta, 13 MLD Bairathi Kanne & CP-25, 26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm.	Tender Conditions Prevails.																																	
170	Volume-2/ Section-7, Part 8 – 166	 the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10 MLD Komaghatta, 13 MLD Bairathi Kanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender.	For automatic BackWash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.																																	

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Sr. No.	Vol.No. / Pg. No.	Description		Query	Reply		
171	Volume-2/ Section-7, Part 8 - 167	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)		As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Kindly confirm.	In cl.no. 8.35, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.		
172	Volume-2/ Section-7, Part 5 -70 & Part 5-94	DISC Filter building		As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable. Kindly confirm.	Tender Conditions Prevails.		
173	Volume-2/ Section-7, Part 5-109	15.22.3 Greenhouse Solar Sludge Drying System for 10 MLD WwTP at U M Kaval	<table><tr><td>Material</td><td>Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.</td></tr></table>	Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.	We understand that the material of construction (MOC) for all parts in contact with sludge shall be SS316L, while all other components may be as per the vendor's standard manufacturing specifications. Kindly confirm.	Tenderer can consider as Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers shall be SS 316L including fasteners and all other parts shall be made of minimum SS 304 Steel material. All stainless steel components must undergo pickling and passivation processes.
Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.						
174	Volume 2, Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEES OF THE PLANT, Pageno. Technical Schedule X- 3	a) Energy Consumption for TSPS, WwTP with Reuse PCA= [{{PCD}}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}}] a) Energy Consumption for TSPS, WwTP without Reuse PCA= [{{PCD}}*{(0.4*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}}]		The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Kindly confirm.	Tender Conditions Prevails.		
175	Volume-2/ Section-7, Part 5 -69 & Part 5-93	ALUMDOSINGSYSTEM(FORALLTREATMENT PROCESSES)		As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Kindly confirm.	Tender Conditions Prevails.		
176	Volume-2/ Section-7, Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a)General and Process. (b)Mechanical (c)Electrical & Instrumentation		The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Kindly confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.		
177	Volume–	Proposed Plot Plan		We kindly request that the proposed plot plan be provided in AutoCAD format.	Refer Addendum-1		
178	Volume-2/ Section-7, Part 5 -48 & Part 5-88	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)		The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Kindly confirm.	Tender Condition Prevail.		

Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
179	Volume-2/ Section-7, Part 8 –120	8.20 Primary/Secondary Clarifiers	We understand that all wetted parts of the Primary and Secondary Clarifiers shall be made of SS 316L, considering the 10-year operation and maintenance period. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
180	Volume-2/ Section-7, Part 5-98	GRAVITY SLUDGE THICKENER	In recent times, various types of mechanical sludge thickeners have become available, offering improved sludge thickening performance compared to gravity thickeners. Therefore, we kindly request that the tenderer be allowed to propose either mechanical or gravity thickeners, based on the process requirements for the Anjanapura WWTP. Kindly confirm.	Tender Conditions Prevails.
181	Volume-2/ Section-7, Part 7 -54	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non- redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Kindly confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	Not Acceptable. The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode. The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27, Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.
182	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally not trained to carry out programming or modifications in the SCADA system, and allowing them to do so may pose operational risks. SCADA modifications require expert programmers who possess the necessary licenses and skills. Therefore, we kindly request that only runtime software for SCADA be considered. Kindly confirm.	Not Acceptable. The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
183	Volume-2/ Section-7, Part 7 -56	Historian Software	As alarms and trends are already stored within the computer-based SCADA system, which includes an inbuilt SQL server, a separate historian system is not necessary. Therefore, we request you to consider a PLC and SCADA system without the requirement for a separate historian. Kindly confirm.	Not Acceptable. In addition with Redundant SCADA system, the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.



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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																								
184	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	Construction Experience- Reuse Plant (with Tertiary Level)---	The proposed tertiary treatment technology is the ultrafiltration (UF) process. Given that the UF system is a critical component of the TTP and that the overall system guarantee is closely tied to membrane design and technology, it should be mandatory for the bidder to enter into a tie-up with a qualified membrane supplier. Accordingly, we propose the following qualification requirement: “The bidder must establish a tie-up with the ultra- filtration membrane supplier or its authorized distributor and submit a Technology Tie-up Agreement as part of the technical bid. The membrane supplier or its authorized distributor must have experience in supplying the proposed ultrafiltration system for at least one (1) tertiary treatment plant of minimum 17.5 MLD capacity (net output) in India for any State/Central Government organization or ULB, which has been operational and performing satisfactorily for a minimum of two years as of the tender calling date. A performance certificate from the end user, certified by an officer not below the rank of Executive Engineer, must be submitted.” Kindly confirm.	Tender Conditions Prevails.																								
185	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent. <table><tr><td>Turbidity</td><td>NTU</td><td>< 2</td></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr><tr><td>BOD</td><td>mg/l</td><td>< 5</td></tr><tr><td>COD</td><td>mg/l</td><td>< 30</td></tr><tr><td>TP</td><td>mg/l</td><td>< 1</td></tr><tr><td>Fecal Coliform</td><td>mg/l</td><td>NIL</td></tr></table>	Turbidity	NTU	< 2	TDS	mg/l	< 1000	TN	mg/l	< 5	BOD	mg/l	< 5	COD	mg/l	< 30	TP	mg/l	< 1	Fecal Coliform	mg/l	NIL	The proposed technology for tertiary treatment is ultrafiltration. As per the tender, bidders are required to have experience in reuse plants with a Total Nitrogen (TN) guarantee of < 5 mg/L. However, in reuse plants using treated sewage, a TN guarantee of < 5 mg/L cannot be ensured after the ultrafiltration process. This is because total nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids. Therefore, we kindly request that the TN guarantee requirement at the outlet of the tertiary treatment plant be adjusted to < 10 mg/L or as arising from the experience criteria. Kindly confirm.	Refer Addendum-1			
Turbidity	NTU	< 2																										
TDS	mg/l	< 1000																										
TN	mg/l	< 5																										
BOD	mg/l	< 5																										
COD	mg/l	< 30																										
TP	mg/l	< 1																										
Fecal Coliform	mg/l	NIL																										
186	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent. <table><tr><td>Parameter</td><td>Unit</td><td>Specified Maximum Concentration</td></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2</td></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr><tr><td>BOD</td><td>mg/l</td><td>< 5</td></tr><tr><td>COD</td><td>mg/l</td><td>< 30</td></tr><tr><td>TP</td><td>mg/l</td><td>< 1</td></tr><tr><td>Fecal Coliform</td><td>mg/l</td><td>NIL</td></tr></table>	Parameter	Unit	Specified Maximum Concentration	Turbidity	NTU	< 2	TDS	mg/l	< 1000	TN	mg/l	< 5	BOD	mg/l	< 5	COD	mg/l	< 30	TP	mg/l	< 1	Fecal Coliform	mg/l	NIL	As per the tender, bidders are required to have experience with reuse plants that meet a Total Dissolved Solids (TDS) guarantee of < 1000 mg/L. However, TDS removal is typically achieved in reuse plants with Reverse Osmosis (RO) systems. Since the technology proposed for tertiary treatment in this tender is ultrafiltration, which does not remove TDS, we kindly request the deletion of the TDS experience criteria or that the TDS values be considered as “As Arising.” Kindly Confirm.	Refer Addendum-1
Parameter	Unit	Specified Maximum Concentration																										
Turbidity	NTU	< 2																										
TDS	mg/l	< 1000																										
TN	mg/l	< 5																										
BOD	mg/l	< 5																										
COD	mg/l	< 30																										
TP	mg/l	< 1																										
Fecal Coliform	mg/l	NIL																										


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Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply												
187	TSPS & WwTPs Design / Sizing Criteria Part 5-37 / 5-80 & Part 5-73 / 5-96	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>TN</td><td>Mg/1</td><td><5</td></tr></table> & <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	TN	Mg/1	<5	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlined in Part 5-73 / 5-96 of the tender. Therefore, nitrogen removal in ultrafiltration systems is incidental to the removal of suspended solids and cannot be guaranteed. In light of this, we kindly request that the Total Nitrogen removal guarantee at the outlet of the tertiary treatment plant after ultrafiltration be set to < 10 mg/L or considered as "As Arising." Kindly Confirm	The design effluent quality requirement for Reuse shall be as defined in the tender document.
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura														
TN	Mg/1	<5														
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
188	TSPS & WwTPs Design / Sizing Criteria Part 5-37 / 5-80 & Part 5-73 / 5-96	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>TDS</td><td>Mg/1</td><td><1000</td></tr></table> & Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	TDS	Mg/1	<1000	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	As per the tender, the proposed technology for tertiary treatment is the ultrafiltration process. Ultrafiltration membranes are designed to remove suspended solids, bacteria, and viruses, as outlined in Part 5-73/5-96. Therefore, the incoming TDS will pass unobstructed through the ultrafiltration membrane. A TDS outlet of < 1000 mg/L can only be guaranteed if the incoming TDS to the ultrafiltration unit is less than 1000 mg/L. In light of this, we kindly request that the TDS guarantee be deleted or that the TDS guarantee at the outlet of the tertiary treatment plant be considered as "As Arising." Kindly Confirm	Tender Conditions Prevails. TDS at outlet of <1000 mg/L can be guaranteed as long as the influent sewage TDS is < 1000 mg/L.
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura														
TDS	Mg/1	<1000														
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
189	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP Anjnapura</th></tr><tr><td>Reuse flo</td><td>-</td><td>17.50</td></tr></table>	Item/Parameter/Description	Units	WwTP Anjnapura	Reuse flo	-	17.50	We assume that the "Reuse Flow" refers to the flow at the outlet of the Ultrafiltration Plant (Permeate Flow). Kindly confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP Anjnapura														
Reuse flo	-	17.50														
190	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP Anjnapura</th></tr><tr><td>No. of Membrane Trains</td><td>3</td><td>3</td><td>5</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP Anjnapura	No. of Membrane Trains	3	3	5	The term "trains" is typically used for pressurized ultrafiltration systems and does not apply to submerged ultrafiltration systems, where the membrane modules are immersed in tanks or cells. Therefore, we assume that in the specified clause, the term "trains" refers to "cells or tanks" for submerged ultrafiltration systems. Additionally, the number of cells or tanks will be as per the recommendation of the UF vendor. Kindly confirm.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.				
Item/Parameter/Description	Units	WwTP at Kaval	WwTP Anjnapura													
No. of Membrane Trains	3	3	5													
191	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP Anjnapura</th></tr><tr><td>No of Feed Pump/Permeate Pump (Working)</td><td>Nos</td><td>2</td><td>4</td></tr><tr><td>Capacity of each feed pump / permeate pump</td><td>m³/hr</td><td>125</td><td>220</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP Anjnapura	No of Feed Pump/Permeate Pump (Working)	Nos	2	4	Capacity of each feed pump / permeate pump	m³/hr	125	220	The tender specifies the number of working feed pumps/permeate pumps as 2 for the Kaval site and 4 for the Anjanapura site. However, the actual number of working pumps may vary based on the UF vendor's design and the type of UF system (submerged/pressurized). Therefore, we request that the number and capacity of feed pumps/permeate pumps be allowed to follow the UF vendor's recommendation. Kindly confirm.	Tender Conditions Prevails. Tender conditions calls for minimum requirement.
Item/Parameter/Description	Units	WwTP at Kaval	WwTP Anjnapura													
No of Feed Pump/Permeate Pump (Working)	Nos	2	4													
Capacity of each feed pump / permeate pump	m³/hr	125	220													

Team Leader

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Response to Pre-Bid Queries

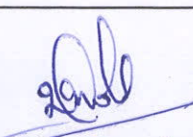
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

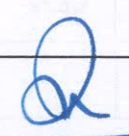
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply						
192	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Minimum UF Plant Recovery</td><td>%</td><td>95</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Minimum UF Plant Recovery	%	95		Refer Addendum-1
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
Minimum UF Plant Recovery	%	95								
193	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	Ultrafiltration membranes typically have a porosity range between 0.01 and 0.07 microns, with 0.04 microns being the most commonly adopted nominal size in the industry. Therefore, we request that a nominal pore size of 0.04 microns for the UF membrane be allowed. Kindly confirm.	Refer Addendum-1
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses								
194	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96 & 8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-113	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Membrane Material (MOC)</td><td>-</td><td>Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.</td></tr></table> & K. PVDF Membrane with Braided The membrane fiber features a Braided PVDF membrane formulation cast on polyester support braid.	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.	PVDF reinforced with polyester is not necessary for submerged ultrafiltration systems, which operate at lower pressures compared to pressurized UF systems. Therefore, we request permission to provide more advanced, 100% PVDF monolithic membranes for the submerged ultrafiltration system. These membranes offer the following advantages: •Greater efficiency compared to braided PVDF membranes, as the PVDF layer tends to peel off during operation, reducing functionality. •Longer membrane lifespan compared to braided PVDF. •Higher reliability. •Reduced chemical consumption compared to braided PVDF. Kindly confirm.	Refer Addendum-1
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.								
195	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Membrane Type</td><td>-</td><td>Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system should be designed to handle peak plant flow conditions. However, as per the tender, the required UF feed pumps will pump water to the ultrafiltration system to generate 5 MLD of permeate flow for Kaval Site and 17.5 MLD of permeate flow for Anjanapura Site. Therefore, we assume that peak plant flow conditions are not applicable for the design of the ultrafiltration system. Kindly confirm.	Refer Addendum-1
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.								
196	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>Maximum Membrane Flux rate</td><td>-</td><td>30 LMH</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	Maximum Membrane Flux rate	-	30 LMH	The maximum membrane flux specified in the tender, i.e., 30 LMH, is typically applicable for MBR systems that operate under high solids load (>5000 mg/L). For UF systems treating secondary treated wastewater, the solids load is usually below 20 mg/L. In such cases, a lower flux rate is unnecessary and could lead to a significant increase in capital costs without offering substantial benefits to the client. Therefore, we kindly request that the average membrane flux rate be allowed to be ≤ 40 LMH. Kindly Confirm.	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
Maximum Membrane Flux rate	-	30 LMH								
197	TSPS & WwTPs Design / Sizing Criteria Part 5-74 / 5-97	Reuse facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval /Anjnapura</th></tr><tr><td>UF Membrane design load factor (on BOD and TSS)</td><td>-</td><td>2</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura	UF Membrane design load factor (on BOD and TSS)	-	2	Please confirm that the load factor for UF membrane design refers to the design safety concerning the inlet parameters to the UF system. Additionally, since UF membranes are designed to remove suspended solids, we understand that the design safety or load factor of two shall apply only to the inlet TSS values for the UF system. Kindly confirm.	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval /Anjnapura								
UF Membrane design load factor (on BOD and TSS)	-	2								

Team Leader

Response to Pre-Bid Queries

Response to Pre-Bid Queries											
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)											
Sr. No.	Vol.No. / Pg. No.	Description		Query	Reply						
198	8.18.16Ultra Filtration System (Submerged/ Pressurized) Part 8-109	D. Working Principle of Submerged UF Process: After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.		We assume that the bidder is allowed to provide rotary drum screens as a mechanical pre-treatment for the submerged ultrafiltration process. Kindly confirm.	Tender Conditions Prevails. It is after Disc filtration system only.						
199	8.18.16Ultra Filtration System (Submerged/ Pressurized) Part 8-112	I.Single Header Design * The SUF product consists of bundles of hollow fiber membranes potted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle) are individually sealed and move freely in the liquid.		The tender specifies that the submerged ultrafiltration system shall have a single header design. However, issues typically associated with double header designs, such as the presence of fibrous material and high MLSS, are not relevant in treated sewage. Double header designs are generally more efficient, providing uniform withdrawal of water from the modules. Therefore, we request approval for the bidder to offer the submerged ultrafiltration header design based on the UF manufacturer’s recommendation/design. Kindly confirm.	Refer Addendum-1						
200	8.18.16Ultra Filtration System (Submerged/ Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Spare Space for module per train</td><td></td><td>10 %</td></tr></table>		Technical Particular	Parameters		Spare Space for module per train		10 %	We understand that for the submerged UF system, the term “train” shall be interpreted as “cell/tank,” and a 10% spare space for modules shall be provided per “cell/tank.” Kindly confirm.	Refer Addendum-1
Technical Particular	Parameters										
Spare Space for module per train		10 %									
201	8.18.16Ultra Filtration System (Submerged/ Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Minimum Operating Life of Membrane</td><td>Years</td><td>10</td></tr></table>		Technical Particular	Parameters		Minimum Operating Life of Membrane	Years	10	The minimum operating life of membranes varies depending on several factors, including the type of system and vendor, and typically ranges from 5 years for pressurized ultrafiltration systems to 7 years for submerged ultrafiltration systems. Therefore, we request you to allow the bidder to propose a minimum operating life of membranes as 7 years. Kindly confirm.	Tender Conditions Prevails.
Technical Particular	Parameters										
Minimum Operating Life of Membrane	Years	10									
202	Volume -1/3.1.2 (b)(i)	Experience in Key Activities Experience in Key Activities Experience in Execution of STPs i. The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos.Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission.		Qualification criteria states that the plants must use one of the listed BNR Technologies as stated above. However, we would like to highlight that the plants which we have executed utilized Membrane Bioreactor (MBR) technology, which is a more advanced and reliable process compared to MBBR, and it fully meets the effluent discharge standards mentioned in the tender & it is finely operational from previous years. A few key advantages of MBR over MBBR include: •Higher effluent quality suitable for reuse applications •Smaller footprint, ideal for space-constrained sites •Elimination of secondary clarifiers due to membrane-based separation •Greater process stability and operational consistency •Better adaptability to stringent regulatory requirements Considering these points, we kindly request you to consider the plant executed using MBR technology as equivalent to those using MBBR technology under the qualification criteria	Tender Conditions Prevails.						


 Team Leader
 PMC : TCE - NJSEI (JV) Consultants
 KWSDRP - BWSSB


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Response to Pre-Bid Queries

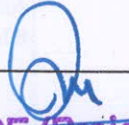
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																											
203	Volume-2 / Section-7, Part 5 -37 & Page 5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>pH</td><td></td><td>6.5-7.5</td></tr><tr><td>BOD</td><td>mg/L</td><td>350</td></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr><tr><td>TSS</td><td>mg/L</td><td>450</td></tr><tr><td>VSS</td><td>mg/L</td><td>360</td></tr><tr><td>TKN</td><td>mg/L</td><td>70</td></tr><tr><td>NH4-N</td><td>mg/L</td><td>45</td></tr><tr><td>Total Phosphorus</td><td>mg/L</td><td>7</td></tr></table>	Influent Wastewater Characteristics			pH		6.5-7.5	BOD	mg/L	350	COD	mg/L	800	TSS	mg/L	450	VSS	mg/L	360	TKN	mg/L	70	NH4-N	mg/L	45	Total Phosphorus	mg/L	7	As per referred clause in the tender document, For BOD=350 mg/L, the corresponding COD value is 800 mg/L. The COD/BOD ratio is on the higher side. In normal practice BOD= 250 mg/L and COD= 425 mg/L is considered as per CPHEEO. We presume that there are no ingresses of Industrial effluent in the Sewage and the COD is biodegradable. Kindly Confirm.	The design influent parameters requirement shall be as defined Part 5, Volume 2/ Section 7, "TSPS & WwTPs Design / Sizing Criteria".
Influent Wastewater Characteristics																															
pH		6.5-7.5																													
BOD	mg/L	350																													
COD	mg/L	800																													
TSS	mg/L	450																													
VSS	mg/L	360																													
TKN	mg/L	70																													
NH4-N	mg/L	45																													
Total Phosphorus	mg/L	7																													
204	Volume-2 / Section-7, Part 5 -37 & Page 5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr></table>	Influent Wastewater Characteristics			COD	mg/L	800	We presume that there are no ingresses of Industrial effluent in the Sewage and more than 95% of COD is biodegradable and less than 5% of COD is non-biodegradable. Or the treated Effluent COD performance requirements may be relaxed subject to the Contractor proving the presence of non-biodegradable COD in the influent which cannot be treated using the processes provided at the Works Kindly Confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.																					
Influent Wastewater Characteristics																															
COD	mg/L	800																													
205	Volume-1 / Page 17 of 234	(iv) Experience in Power Generating Facility The Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of at least One (1) No. Waste water Treatment Plant of 28 MLD capacity with power Generating Facility of minimum 480 kw per hour from Anaerobic Digestion and in operation for One year in last five years as on date of bid submission.	As per the Tender document, the tenderer is required to demonstrate experience in a Power Generating Facility, which should have been based only on wastewater. We kindly request you to allow the experience of developing, designing, and constructing a biogas power plant based on any organic waste, with a power generating facility of a minimum of 480 kW per hour from anaerobic digestion, which has been in successful operation for at least one year within the last five years as of the bid submission date. The same has been considered in the recent NMCG tenders such as Dhanbad and Lucknow etc.. Also, if the Bidder or any Member of the JV does not have any experience of having developed or designed and constructed a biogas power plant, the Bidder can Tie-up with an experienced power plant developer which has developed and/or designed a biogas power plant, which meets the criteria. Kindly Confirm	Tender Conditions Prevails.																											



Team Leader

PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB

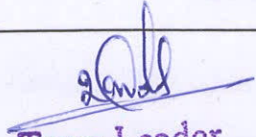


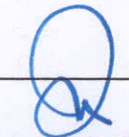
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Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
206	Volume-1 / Page 16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPs The tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 52 MLD capacity and above or Two (2) Nos. of Waste Water Treatment Plants of minimum 26 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10 mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal MPN/100 ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	As per the Tender document, Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i). We understand that the referred clause has mentioned the effluent quality standards at the outlet of STP and not after the secondary treatment process. Therefore, for the purpose of demonstrating compliance, the Technology Provider supplying the secondary treatment process must ensure that the treated effluent meets the following key parameters at the final outlet, as specified in the clause — excluding fecal coliform: •BOD ≤ 10 mg/L •COD ≤ 50 mg/L •TSS ≤ 10 mg/L •Total Nitrogen (TN) ≤ 10 mg/L •Total Phosphorus (TP) ≤ 1 mg/L Kindly Confirm.	Refer Addendum-1
207	Volume-1 / Page 14 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider is required to provide evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP) as per Clause 3.1.2(b)(i). We note that the referred clause does not explicitly mention the required capacity of this reference WWTP. We understand that the Technology Provider must demonstrate having successfully supplied the technology for at least one (1) WWTP of 52 MLD capacity in line with Clause 3.1.2(b)(i). Kindly confirm	Refer Addendum-1
208	Volume-2 / Section-7, Part 5 -64 & Part 5-90	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the previous tender of BWSSB-i.e. CP25 package and 10 MLD STP at Jakkur project which was based on SBR technology, this particular clause had been deleted. We presume that same shall be followed for the present tender also. Kindly confirm.	Tender Conditions Prevails.
209	Volume-2 / Section-7, Part 5 -64 Volume-2 / Section-7, Part 5-90	HRT at average flow: 24 Hrs. HRT at average flow: 16.8 Hrs.	HRT is the derived factor based on the selected SBR cycle time and Inlet characteristics of the sewage. We understand that the HRT shall be as per process requirement and as per recommendation of Technology provider to achieve the outlet sewage characteristics as per tender requirement. Kindly Confirm.	Tender Conditions Prevails.
210	Volume-2 / Section-7, Part 5 -64 & Part 5-90	Mixing with Air: For pre-zone or selector zone mixing, dedicated coarse bubble diffuser shall be provided with dedicated flow measurement to each pre-zone or selector zone.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no such criteria for air flow measurement to selector zone. Hence, we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails


Team Leader
PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB


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Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)				
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
211	Volume-2 / Section-7, Part 5 -52& Part 5-91	Decanter Weir Length: Minimum decanting flow rate of 1.7 times the average flow shall be considered to calculate the decanter weir length in each basin.	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi, This specific criteria was not mentioned. Hence we presume that the same criteria is not applicable for this project also. Kindly confirm.	Tender Conditions Prevails.
212	Volume-2 / Section-7, Part 5 -66 & Part 5-91	Maximum Decanter Weir loading rate: 120 m3/h/m	In the previous tender of BWSSB-i.e. CP25, CP 26 and CP 27 package based on SBR technology, the Maximum Decanter Weir loading rate was 125 m3/h/m (Addendum-8). We presume that same shall be followed for the present tender also.	Tender Conditions Prevails.
213	Volume-2 / Section-7, Part 8 -100	Decanters (For SBR system)	We presume that all decanter specifications shall be acceptable as per the technology providers standard specifications. As bidder has to submit the technology Tie-Up agreement in his technical bid. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
214	Volume-2 / Section-7, Part 8 -100	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	We presume that all decanter mechanism is an integral part of Technology components. Also, bidder has to submit the technology Tie-Up agreement in his technical bid. Therefore, pipe schedule(s) mentioned under decanter specifications are not applicable for decanters. Kindly Confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.
215	Volume-2 / Section-7, Part 5 -66 & Part 5-92	Peak Oxygen Demand Factor: 1.3	In the previously published tenders by BWSSB :- 10 MLD STP Malathahalli and 10 MLD STP Kempambudhi there was no criteria for Peak Oxygen Demand Factor. Hence we presume that the same criteria is not applicable for this project also. Kindly Confirm.	Tender Conditions Prevails
216	Volume-2 / Section-7, Part 5 -67 & Part 5-92	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The given factors in the tender document, Alpha, Beta and Fouling Factor, depend on the diffuser type, MoC, and self-cleaning capacity which can vary within the range given in the latest edition of Metcalf and Eddy. Therefore, we presume that the given factors can be considered as per the latest edition of Metcalf and Eddy to design the aeration system. Kindly Confirm	Tender Conditions Prevails
217	Volume-2 / Section-7, Part 8 -83 to Part 8 -186 Volume-2 / Section-7, Part 8 -101 to Part 8 -103	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	In the Tender document, two different Diffuser specifications are given as mentioned in referred clause. We understand that the Diffuser specifications given in the Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment process where diffused aeration is applicable. Kindly Confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted Refer Addendum-1

Team Leader

PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSBCE (Project)
BWSSB

Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply						
218	Volume-2 / Section-7, Part 5 -67 & Part 5-92	Process Air Blowers for all Treatment Processes Design SOTE per m depth of water (Minimum to be provided and maximum to be used as design basis) – 5.50 %	The SOTE of the latest advanced diffusers are achieving more than that specified in the tender. Kindly allow us to provide the SOTE as per the diffuser manufacturer’s design. The letter from the diffuser manufacturer shall be submitted during detailed engineering stage. Kindly Confirm.	Tender Conditions Prevails						
219	Volume-2 / Section-7, Part 8-83	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (h) The bubble should retain a solid spherical shape. The bubbles produced from the diffuser shall be minimum 0.5 mm.	The perforation and bubble size of diffuser may varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly request to accept the perforation and bubble size as per Diffuser Manufacturers Design. Kindly Confirm.	Tender Condition Prevails.						
220	Volume-2 / Section-7, Part 8-83	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers ...maximum outer diameter (OD) shall not be more than 90 mm.	Kindly request to accept the outer diameter (OD) as per design of Diffuser Manufacturers as specified in the tender document. As the outer diameter (OD) of diffuser varies from Manufacturer to Manufacturer with a guarantee for the performance. Kindly Confirm	Tender Condition Prevails.						
221	Volume-2 / Section-7, Part 8-83	8.18 Fine Bubble tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (b) The diffuser shall be fine bubble membrane tube type diffuser consisting of a single piece injection-molded polypropylene/uPVC tube surrounded by a membrane sleeve	The provided specifications for diffusers are pertaining to a specific vendor. Therefore, we understand that the diffuser specifications of any approved vendor M/s Environmental Dynamics, M/s OTT GMBH, M/s Rehau Polymer, M/s SSI Aeration mentioned in‘CONSOLIDATED Mechanical Equipment VENDOR LIST’shall be acceptable.	It has been reconfirmed that the listed vendors in approved list are satisfying the Bid Specification requirements. Hence Tender Conditions Prevails.						
222	Volume-2 / Section-7, Part 8-84 & Volume-2 / Section-7, Part 5-9	8-18 Fine Bubble Tubular Membrane Diffusers 8.18.1 Tubular Type Diffusers (n) Provide a back-flow prevention device built integrally with the diffuser that prevents backflow into the diffuser and air piping. & Contractor shall provide back flow prevention mechanism / check valve inside each diffuser to prevent intrusion of liquid and/or solids into the diffuser and air piping under normal operating conditions of aeration system.	Many diffuser manufacturers under approved vendor list of the tender provide slits on the membrane which act as a prevention of backflow into the diffuser. These slits automatically get closed when air supply is stopped. We understand that any separate prevention device/mechanism is not required in this case. Also, the same was accepted in CP-25, CP-26 & CP-27 tenders called by BWSSB. Kindly Confirm.	Yes confirmed. Diffuser shall be provided with a back flow prevention device built integrally with the diffuser that prevents backflow or Diffuser membrane slits can also act as a prevention of backflow into the diffuser. Diffuser slits automatically get closed when air supply is stopped into the diffuser and air piping. Refer Addendum-1						
223	Volume-2 / Section-7, Part 8 - 91	<table><tr><th>Sl.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Sl.no.	Description	Material of Construction	f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool	In recent days various MOC of Acoustic closures for Turbo air blowers are available. Kindly allow tenderer to provide acoustic enclosure for Turbo Blower of MOC as per manufacturer’s standard. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
Sl.no.	Description	Material of Construction								
f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool								
224	Volume-2 / Section-7, Part 8 - 188	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yuchon has been accepted as disc filter supplier In the previously published many tenders by BWSSB such as STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur,10 Komaghatta, 13 MLD ByrathiKanne. Therefore, we presume that the tenderer can propose M/s. Yuchon Make Fiber Disc filter for this tender. Kindly Confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.						

Team Leader

 CE (Project)
 BWSSB

Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																																	
225	Volume-2 / Section-7, Part 5 -70& Part 5-94	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the Design flow for the Disc filter unit shall be maximum incoming flow to the disc filter unit. In the case of SBR system, FDF unit shall be designed with the average flow or the decant flow whichever is higher. Kindly confirm.	Tender Conditions Prevails.																																	
226	Volume-2 / Section-7, Part 1 -12 Volume-2 / Section-7, Part 5-37 Volume-2 / Section-7, Part 5-79	<table><thead><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr></thead><tbody><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD₅ at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></tbody></table>	Parameters	Unit	Value	TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE			pH - Instantaneous range	-	6.5-8.0	BOD ₅ at 20°C - Maximum monthly average	mg/L	10	COD - Maximum monthly average	mg/L	50	TSS - Maximum monthly average	mg/L	10	TN - Maximum monthly average	mg/L	10	Total Phosphorus - Maximum monthly average	mg/L	1	Residual Chlorine - Instantaneous	mg/L	1	Fecal Coliform – Maximum Monthly average	MPN/100 mL	100	Fecal Coliform – Ceiling Limit (in any day)	MPN/100 mL	230	As per the tender document the required treated effluent quality requirements such as BOD, COD, TSS, TN & TP can be achievable at the outlet of the biological treatment process like SBR. In such cases there shall be no need of Disc filter to be proposed for achieving the treated effluent quality. Hence we understand that the Disc filter shall be provided as per the process requirement. Kindly confirm.	Tender Conditions Prevails.
Parameters	Unit	Value																																			
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227	Volume-2 / Section-7, Part 8 -165	Disc Filter	The provided specifications for Disc Filters are pertaining to a specific vendor and this are compiled by only one or two vendor's mentioned in the approved vendor list. Therefore, we understand that the Disc filter specifications shall be acceptable as per approved vendor. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																																	
228	Volume-2 / Section-7, Part 8 - 166	Filter Membrane: Stainless steel screen / Mesh: SS-316L	Polyester filter cloth or SS 316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we understand such requirement shall be applicable for this said tender. Kindly Confirm.	Tender Conditions Prevails.																																	
229	Volume-2 / Section-7, Part 8 – 166	 the automatic valve and suction cleaning pump which shall be	Automatic valves for suction cleaning pump arrangement was not mentioned in previous tenders like 10 MLD Komaghatta, 13 MLD BairathiKhanne& CP-25, 26 & 27. Hence, we understand such requirement shall not be applicable for this said tender. Kindly Confirm.	For automatic BackWash operation this valve is suggested in fully submerged Disc filters, Tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.																																	
230	Volume-2 / Section-7, Part 8 - 167	Protective Top Cover and Body cover along with frame structure : SS316 (Minimum 4mm for Body cover)	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore, we presume that fully submerged Fiber Disc Filter without cover shall be acceptable. Kindly confirm.	In cl.no. 8.35, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.																																	
231	Volume-2 / Section-7, Part 5 -70 & Part 5-94	DISC Filter building	As per tender document we are proposing fully submerged fiber disc filter. This type of filter need not require any kind of covering/shed/RCC roof. Therefore, we presume that fully submerged Fiber Disc Filter without roof shall be acceptable. Kindly confirm.	Tender Conditions Prevails.																																	

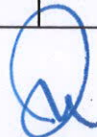
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply		
232	Volume-2 / Section-7, Part 5-109	15.22.3 Greenhouse Solar Sludge Drying System for 10 MLD WwTP at U M Kaval <table><tr><td>Material</td><td>Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.</td></tr></table>	Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.	We understand that the MOC of parts in contact to sludge as SS316L, whereas all other parts can be as per the vendor's manufacturing standard. Kindly confirm.	Tenderer can consider as Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers shall be SS 316L including fasteners and all other parts shall be made of minimum SS 304 Steel material. All stainless steel components must undergo pickling and passivation processes.
Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.					
233	Volume 2, Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEES OF THE PLANT, Page no. Technical Schedule X- 3	a)Energy Consumption for TSPS, WwTP with Reuse PCA = [{PCD}*{(0.42*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}] a)Energy Consumption for TSPS, WwTP without Reuse PCA = [{PCD}*{(0.4*QA/QD)+(0.24*BA/BD)+(0.24*TA/TD)+(0.1*NA/ND)}]	The said formula for energy consumption shall not be applicable in case the Terminal Sewage Pumping Station as the value is energy consumption value can be arrived on basis sewage quantity pumped and not on pollutant loadings like BOD/TSS/TKN. Therefore, we understand that the formulae provided for determining the energy consumption of ISPS shall be applicable for TSPS. Kindly confirm.	Tender Conditions Prevails.		
234	Volume-2 / Section-7, Part 5 -69 & Part 5-93	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender an alum dosing system shall be required for chemical phosphorus removal. We presume that if Total Phosphorous ≤ 1 mg/l as mentioned in the tender is achieved biologically i.e. Biological nutrient removal process then Alum Dosing system shall not be required. Therefore, alum dosing system shall be optional and shall be provided if required as per process requirement to achieve Total Phosphorous as ≤ 1 mg/l. Kindly Confirm.	Tender Conditions Prevails.		


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																								
235	Volume-2 / Section-7, Part 5 -19	5.15Hydraulic Design Requirement • Maximum pipe flow velocity shall be no more than 1.0 m/s for all gravity flow and pump suction lines unless specified otherwise. • Maximum pipe flow velocity shall be no more than 1.5 m/s for all pumped discharge lines unless specified otherwise. • Calculated normal velocity (at 20°C and 1atm) of air piping shall not be more than 16 m/s. • For channels, the maximum velocity shall be no more than 1.0 m/s. • For liquids the maximum velocity through gate opening shall be no more than 1.0 m/s unless specified otherwise.	In the tender document, mentioned Velocities in tender document are on lower side: Following table shows velocities for various services which are used as per good engineering practices, in many STP's. <table><tr><th>Sr. No.</th><th>Service</th><th>Design Velocity m/s</th><th>Limitations</th></tr><tr><td>1</td><td>Gravity Lines for Sewage & Water</td><td>0.6 – 1.2 Designed as pipe line flowing full.</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 1.2 m/sec is allowable at Peak Flow.</td></tr><tr><td>2</td><td>Pressure Lines for Sewage & Water</td><td>0.6 – 2.5</td><td>Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 2.5 m/sec is allowable at Peak Flow.</td></tr><tr><td>3</td><td>Air (Pressurized Lines)</td><td>18 – 22</td><td>Max. Velocity shall not be more than 25 m/sec in any section.</td></tr><tr><td>4</td><td>Scum & Sludge Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not be less than 150 mm for Gravity Lines.</td></tr><tr><td>5</td><td>Chemical Feed Lines</td><td>0.6 – 1.5</td><td>Irrespective of flow, Diameter shall not less than 20 mm.</td></tr></table> We presume that, above table shall be followed for proposed STPs. Kindly Confirm.	Sr. No.	Service	Design Velocity m/s	Limitations	1	Gravity Lines for Sewage & Water	0.6 – 1.2 Designed as pipe line flowing full.	Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 1.2 m/sec is allowable at Peak Flow.	2	Pressure Lines for Sewage & Water	0.6 – 2.5	Min. Velocity shall not be less than 0.6 m/sec. Max. Velocity up to 2.5 m/sec is allowable at Peak Flow.	3	Air (Pressurized Lines)	18 – 22	Max. Velocity shall not be more than 25 m/sec in any section.	4	Scum & Sludge Lines	0.6 – 1.5	Irrespective of flow, Diameter shall not be less than 150 mm for Gravity Lines.	5	Chemical Feed Lines	0.6 – 1.5	Irrespective of flow, Diameter shall not less than 20 mm.	Tender Conditions Prevails.
Sr. No.	Service	Design Velocity m/s	Limitations																									
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5	Chemical Feed Lines	0.6 – 1.5	Irrespective of flow, Diameter shall not less than 20 mm.																									
236	Volume-2 / Section-7, Part 5 -14	While selecting any type of pump and blower, priority shall be given to higher pump/blower efficiency and lower power consumption and shall ensure that pump/blower can operate at high efficiency throughout its service life. At minimum contractor shall ensure efficiencies of pump/blower as listed below: •Minimum efficiency of Submersible Pumps for TSPS shall be 70% •Minimum efficiency of Axial Tubular Pump (MLR) shall be 70% • Minimum efficiency of RAS Pump (Horizontal/Vertical Non-clog solid handling) shall be 65%. • Minimum efficiency of Sludge Pump (Progressive Cavity/Screw pump) shall be 45%. •Minimum efficiency of Rotary Tri-Lobe blower shall be 70% •Minimum efficiency of Centrifugal Turbo blower shall be 90%	The efficiency of the various equipment are mostly depends on the suitable model selection for duty condition and Manufacturer's design. Therefore, kindly accept the efficiency of the various equipment as per design of manufacturer. Kindly Confirm.	Refer Addendum-1																								
237	Volume-2 / Section-7, Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a) General and Process. (b) Mechanical (c) Electrical & Instrumentation	Tender specifies vast submission of documents. It is not possible to submit all these documents at bidding stage. We understand that submittals given under the head a) General and Process shall be submitted during the bidding stage. All other documents shall be submitted after award of contract. Kindly confirm.	The Tenderer shall submit all the document specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide a undertaking for non-submission.																								
238	Volume – 4 Drawings	Proposed Plot Plan	Kindly request to provide the proposed plot plan in AutoCAD format.	Refer Addendum-1																								

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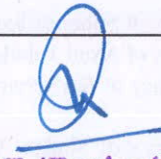
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
239	Volume-2 / Section-7, Part 5 -48 & Part 5-88 Volume-2 / Section-7, Part 5 -54 Volume-2 / Section-7, Part 5 -61	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	Tender mentions that, bidder shall provide calculations for operating the WwTP at Design Flows with 1 tank/unit/module offline for maintenance. We presume that the same is applicable for secondary clarifiers as well. Kindly Confirm.	Tender Conditions Prevails.
240	Volume-2 / Section-7, Part 8 –120	8.20 Primary/Secondary Clarifiers	We understand that all wetted part of Primary/Secondary Clarifiers shall be of SS 316L considering the 10 years of operation and maintenance. Kindly Confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
241	Volume-2 / Section-7, Part 5-98	GRAVITY SLUDGE THICKENER	In recent days there are many type of mechanical sludge thickener available and providing better sludge thickening results then gravity sludge thickeners. Hence, we request you to kindly allow tenderer to provide either mechanical thickeners or gravity thickeners as per process requirement for Anjanapura WWTP. Kindly confirm.	Tender Conditions Prevails.
242	Volume-2 / Section-7, Part 5-9	The floors of all liquid-holding structures shall be appropriately sloped and trenches and drain sumps shall be provided at the bottoms of such slopes to facilitate complete drainage of liquid.....	Generally, slope is not required in aeration basin. RAS/SAS pump pit shall be provided in aeration basins for sludge collection and pumping. If slope is provided, it will affect the diffuser grid installation, alignment and performance. Kindly Confirm.	The slope requirement shall be as per the tender requirement. And bidder can propose very mild slope may be of 1:5000.
243	Volume-2 / Section-7, Part 5-10	For liquid-holding structures, the drain piping and fittings shall be sized such that the entire structure can be drained by gravity in no more than eight (8) hours.	We understand that this requirement is not applicable to aeration tank. Kindly Confirm.	Tender Conditions Prevails
244	Volume-2 / Section-7, Part 5-10	The Plant Drain Pumping Station, Plant Drain Pumps, and other related equipment and controls shall be designed and sized to allow draining of the structure with the largest volume from full to empty within eight (8) hours.	We understand that this requirement is not applicable to aeration tank. Kindly Confirm.	Tender Conditions Prevails


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																																				
245	General	MOC Of Pipe line for Various Applications	MOC for pipe line are missing in the tender document. We request you to allow us to provide following MoCs for Various applications: <table><tr><th>Sr. No.</th><th>Service</th><th>Type of Flow</th><th>MOC</th></tr><tr><td>1</td><td>Waste Water / Sludge</td><td>Gravity</td><td>RCC NP-3 Class</td></tr><tr><td>2</td><td>Waste Water / Sludge</td><td>Gravity/Pressurized</td><td>CI Class "LA" / DI K-9</td></tr><tr><td>3</td><td>Service Water</td><td>Gravity Pressurized</td><td>GI "C" Class</td></tr><tr><td>4</td><td>Air Lines: Headers, Vertical Down-comers</td><td>Pressurized</td><td>Above Water: MS Sand/Shot Blasted, Epoxy Painted Under Water: SS 304</td></tr><tr><td>5a</td><td>Air Grid Piping: Aeration Zone</td><td>Pressurized</td><td>UPVC Schedule 40</td></tr><tr><td>5b</td><td>Air Grid Piping: Selector Zone</td><td>Pressurized</td><td>SS 304</td></tr><tr><td>6</td><td>Chemicals</td><td>Gravity Pressurized</td><td>SS 304 except Chlorine & FeCl3</td></tr><tr><td>7</td><td>Chlorine & FeCl3</td><td>Gravity Pressurized</td><td>Schedule 40 UPVC</td></tr></table>	Sr. No.	Service	Type of Flow	MOC	1	Waste Water / Sludge	Gravity	RCC NP-3 Class	2	Waste Water / Sludge	Gravity/Pressurized	CI Class "LA" / DI K-9	3	Service Water	Gravity Pressurized	GI "C" Class	4	Air Lines: Headers, Vertical Down-comers	Pressurized	Above Water: MS Sand/Shot Blasted, Epoxy Painted Under Water: SS 304	5a	Air Grid Piping: Aeration Zone	Pressurized	UPVC Schedule 40	5b	Air Grid Piping: Selector Zone	Pressurized	SS 304	6	Chemicals	Gravity Pressurized	SS 304 except Chlorine & FeCl3	7	Chlorine & FeCl3	Gravity Pressurized	Schedule 40 UPVC	Tender Conditions Prevails
Sr. No.	Service	Type of Flow	MOC																																					
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5b	Air Grid Piping: Selector Zone	Pressurized	SS 304																																					
6	Chemicals	Gravity Pressurized	SS 304 except Chlorine & FeCl3																																					
7	Chlorine & FeCl3	Gravity Pressurized	Schedule 40 UPVC																																					
246	Volume-2 / Section-7, Part7 -54	PLC shall be provided as a Hot Stand-by Controller	We understand that redundant PLC has been specified to avoid long interruption in the plant operation & controls. Alternatively, it can also be achieved by providing normal non-redundant PLC along with spares such as pre-programmed PLC hardware like CPU, Power supply etc. In the unlikely event of PLC system failure, the same can be made functional within 1-2 hrs with the help of the spares. Kindly confirm that we can consider non-redundant PLC with required spares.	The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode.The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27.d), Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.																																				
247	Volume 2/Section 7, Part 7-54 & part 7-56	7.13.1 Redundant SCADA Dual redundant SCADA system and Historian software Operator work Station, loaded with Runtime SCADA Server SCADA Operator work station with licensed SCADA software SCADA Engineering work station with licensed SCADA software	Operator available in STP plant are not skilled to do programming of SCADA system and it is dangerous to do changes in SCADA with them. For this Expert programmer is required, who always carry required licenses with them. Hence, we request you to consider runtime software for SCADA.	The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.																																				

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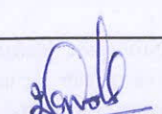
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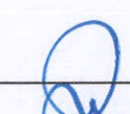
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
248	Volume-2 / Section-7, Part 7 -56	Historian Software	Alarm & trends are store in computer-based SCADA with inbuilt capability SQL server, hence separate system is not required to store data. We request you to consider PLC & SCADA system without Historian.	In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.
249	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level)---	The technology proposed for tertiary treatment is ultrafiltration process. Ultrafiltration system is the most critical aspect of the tertiary treatment plant as the system guarantee is dependent upon the UF design and membrane technology . Hence, it shall be mandatory to tie-up with membrane supplier as per the following experience criteria :- “Bidder must tie-up with the ultra-filtration membrane supplier or its authorized distributor for Ultrafiltration Technology and shall submit Technology Tie-up Agreement as a part of their technical bid. The membrane supplier or its authorized distributor shall have experience of providing proposed ultrafiltration system for at least One (1) TTP of min. 17.5 MLD capacity (Net output) in India for any State/Central Government organizations /ULB's which is working satisfactorily for at least two years as on date of calling of tender. Performance Certificate for work should be issued by the end user, duly certified by officer not below the rank of Executive Engineer should be enclosed.” Kindly confirm.	Not Acceptable. Tender Conditions Prevails.
250	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent	The technology proposed for tertiary treatment is ultrafiltration process. As per tender, the bidder needs to have experience in Reuse Plants with the total Nitrogen Guarantee of < 5 mg/L . However in reuse plants using treated sewage, TN guarantee of < 5 mg/L cannot be guaranteed after Ultra-Filtration Systems ; since total nitrogen removal in Ultrafiltration Systems will be incidental to the removal of Suspended solids. Hence we request you to allow TN guarantee at outlet of Tertiary Treatment Plant as < 10 mg/L or As Arising for experience criteria. Please confirm.	Refer Addendum-1
251	SECTION 2, INSTRUCTIONS TO TENDERERS (ITT) Page 16 of 234	3.1.2. (b)(ii) Construction Experience- Reuse Plant (with Tertiary Level) The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent	As per tender, the bidder needs to have experience in Reuse Plants with the TDS Guarantee of < 1000 mg/L . TDS guarantee is provided in reuse plants having RO treatment systems. Since the technology proposed for tertiary treatment for this tender is ultrafiltration process which cannot remove TDS, kindly delete the experience criteria for TDS or allow TDS values as “As Arising”. Please confirm.	Refer Addendum-1


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply												
252	TSPS & WwTPs Design / Sizing Criteria Part 5-37 / 5-80 & Part 5-73 / 5-96	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr></table> & Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/Anjanapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	TN	mg/l	< 5	Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	The technology proposed for tertiary treatment is ultrafiltration process as per tender. Ultrafiltration membranes are designed to remove suspended solids, bacteria and viruses ; also mentioned in Part 5-73 / 5-96. Hence Nitrogen removal in Ultrafiltration Systems will be incidental to the removal of Suspended solids and cannot be guaranteed. Hence we request you to allow Total Nitrogen Removal guarantee at outlet of Tertiary Treatment Plant after Ultrafiltration as < 10 mg/L or As Arising . Please confirm.	The design effluent quality requirement for Reuse shall be as defined in the tender document.
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
TN	mg/l	< 5														
Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
253	TSPS & WwTPs Design / Sizing Criteria Part 5-37 / 5-80 & Part 5-73 / 5-96	TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE (APPLICABLE AS SPECIFIED) <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr></table> & Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	TDS	mg/l	< 1000	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	The technology proposed for tertiary treatment is ultrafiltration process as per tender. Ultrafiltration membranes are designed to remove suspended solids, bacteria and viruses ; also mentioned in Part 5-73/5-96. Hence the incoming TDS shall pass unobstructed through the Ultrafiltration membrane. TDS outlet of <1000 mg/l can be guaranteed as long as the incoming TDS to Ultrafiltration Unit is < 1000 mg/L. Hence we request you to delete the guarantee for TDS or allow TDS guarantee at outlet of Tertiary Treatment Plant as “As Arising ” . Please confirm	Tender Conditions Prevails. TDS at outlet of <1000 mg/L can be guaranteed as long as the influent sewage TDS is < 1000 mg/L.
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
TDS	mg/l	< 1000														
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
254	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP at Anjanapura</th></tr><tr><td>Reuse Flow</td><td>MLD</td><td>5</td><td>17.50</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura	Reuse Flow	MLD	5	17.50	We Assume that Reuse Flow means flow at outlet of Ultrafiltration Plant (Permeate Flow). Please confirm	Refer Addendum-1				
Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura													
Reuse Flow	MLD	5	17.50													
255	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP at Anjanapura</th></tr><tr><td>No of Membrane Trains</td><td>Nos</td><td>3</td><td>5</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura	No of Membrane Trains	Nos	3	5	The terminology of membrane “trains” is applicable to Pressurised ultrafiltration systems and not to Submerged ultrafiltration systems; since the membrane modules are immersed in tanks or cells. Hence we assume that trains mentioned in the specified clause shall refer to “cells or tanks” for Submerged ultrafiltration systems . Also, the number of tanks or cells shall be as per the recommendation of UF vendor. Please confirm	Tender Conditions Prevail.				
Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura													
No of Membrane Trains	Nos	3	5													

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply												
256	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP at Anjanapura</th></tr><tr><td>No of Feed Pump/Permeate Pump (Working)</td><td>Nos</td><td>2</td><td>4</td></tr><tr><td>Capacity of each feed pump / permeate pump</td><td>m³/hr</td><td>125</td><td>220</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura	No of Feed Pump/Permeate Pump (Working)	Nos	2	4	Capacity of each feed pump / permeate pump	m³/hr	125	220	The tender specifies number of Working Feed Pumps/Permeate Pump to be 2 Nos for Kaval Site and 4 Nos for Anjanapura Site. The Number of Working Pumps can be more or less as per UF vendor design and type of UF – submerged /pressurised . Hence please allow the number and capacity of Feed Pump/Permeate Pump to be as per UF vendor recommendation	Tender Conditions Prevails
Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura													
No of Feed Pump/Permeate Pump (Working)	Nos	2	4													
Capacity of each feed pump / permeate pump	m³/hr	125	220													
257	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Minimum UF Plant Recovery</td><td>%</td><td>95</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Minimum UF Plant Recovery	%	95	Maximum Recovery possible through UF systems is ~ 93-94 %. Extra Recovery is achieved only through additional UF backwash recovery systems that will treat the UF Backwash Waste and make it available for reuse. Since surplus flow is available at the inlet of UF plant, we request you to allow minimum recovery of 93 % for UF plants. Please confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Minimum UF Plant Recovery	%	95														
258	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	Ultrafiltration Porosity ranges from 0.01 to 0.07 microns with most of the industry adopting for 0.04 microns as the nominal size. Therefore, we request you to allow 0.04 microns nominal pore size for UF membrane . Kindly confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
259	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96 & 8.18.16 Ultra Filtration System (Submerged/ Pressurized)	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Material (MOC)</td><td>-</td><td>Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.</td></tr></table> & K. PVDF Membrane with Braided The membrane fiber features a Braided PVDF membrane formulation cast on polyester support braid.	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.	PVDF Reinforced with polyester is not required for submerged ultrafiltration systems that operate on lower pressures than Pressurised UF systems. Hence please allow the bidder to provide more superior monolithic membranes made up of 100 % PVDF for submerged ultrafiltration system that have the following advantages ☐ More Efficient than braided PVDF membranes as the PVDF layer tends to peel off during operation leading to loss of functionality ☐ Longer Membrane Life over braided-PVDF membrane ☐ More Reliable ☐ Lesser Chemical Consumption as compared to braided PVDF Please confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.														
260	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Type</td><td>-</td><td>Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system needs to be designed to handle peak plant flow conditions. However as per tender, UF feed pumps of required capacity shall pump water to the ultra-filtration system in order to generate 5 MLD of permeate flow for Kaval Site and 17.5 MLD of permeate flow for Anjanapura Site. Hence we assume that peak plant flow conditions are not applicable for design of ultrafiltration system. Please confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.														

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply						
261	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/Anjanapura</th></tr><tr><td>Maximum Membrane Flux rate</td><td>-</td><td>30 LMH</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura	Maximum Membrane Flux rate	-	30 LMH	The Maximum membrane flux mentioned in tender i.e. 30 LMH is applicable for MBR systems that operate under high solids load (>5000 mg/L) For UF systems that treat secondary treated waste water the solids load will rarely exceed 20 mg/L . In such a case , lower flux is not required and will result in substantial increase in capital cost without any significant benefit to the client. Hence we request you to allow Average Membrane Flux rate to be ≤ 40 LMH. Please confirm	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura								
Maximum Membrane Flux rate	-	30 LMH								
262	TSPS & WwTPs Design / Sizing Criteria Part 5-74 / 5-97	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/Anjanapura</th></tr><tr><td>UF Membrane design load factor (on BOD and TSS)</td><td>-</td><td>2</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura	UF Membrane design load factor (on BOD and TSS)	-	2	Please confirm that load factor for UF membrane design refers to design safety on inlet parameters to UF system. Also, since UF membranes are designed for suspended solids removal, the design safety or load factor of two shall only be applicable on inlet TSS values to UF System. Please confirm.	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura								
UF Membrane design load factor (on BOD and TSS)	-	2								
263	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-109	D. Working Principle of Submerged UF Process: After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.	We assume that bidder can provide rotary drum screens as mechanical pre-treatment for submerged ultrafiltration process. Please confirm.	Tender Conditions Prevails. It is after Disc filtration system only.						
264	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-112	II.Single Header Design • The SUF product consists of bundles of hollow fiber membranes potted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle) are individually sealed and move freely in the liquid.	The tender specifies that the submerged ultrafiltration system shall have single header design. However the problems associated with double header design are only observed in MBR systems due to the presence of fibrous material and high amount of MLSS in MBR tanks. Both of the issues are not present in treated sewage. Double header designs are more efficient since it allows for uniform withdrawal of water from the modules. Hence please allow the bidder to offer submerged ultrafiltration header design as per the UF manufacturer recommendation / design. Please confirm	Refer Addendum-1						
265	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Spare Space for module per train</td><td></td><td>10 %</td></tr></table>	Technical Particular	Parameters		Spare Space for module per train		10 %	We understand that for submerged UF system “train” shall refer to "cell/tank" and 10 % spare space for module shall be provided per “cell/tank”. Kindly confirm.	Refer Addendum-1
Technical Particular	Parameters									
Spare Space for module per train		10 %								
266	8.18.16 Ultra Filtration System (Submerged/ Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Minimum Operating Life of Membrane</td><td>Years</td><td>10</td></tr></table>	Technical Particular	Parameters		Minimum Operating Life of Membrane	Years	10	The minimum operating life of membranes depends upon various factors , type of system , vendor etc. and typically ranges from 5 years for Pressurised Ultrafiltration system to 7 years for submerged ultrafiltration system. Hence we request you to allow the bidder to provide Minimum Operating Life of Membrane as 7 years. Please confirm.	Tender Conditions Prevails.
Technical Particular	Parameters									
Minimum Operating Life of Membrane	Years	10								

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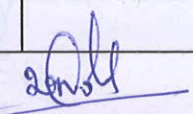
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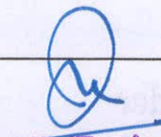
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
267	Qualification of the Tenderer: 3.1.1 General Construction Experience: & 3.1.2 Particular Construction Experience	General & Technical Qualification of Tenderer required in last 05 years.	We kindly request you to consider General & Technical Qualification in Last 07 years. As in all other government and semi government organization last 07 years is allowed for similar type of major projects	Not Acceptable, Tender Conditions Prevails
268	3.1.2 Particular Construction Experience	(i) Experience in Execution of WwTPs i. The Tenderer as a sole entity or a lead partner and or partner in a joint venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing and Commissioning of all Civil, Mechanical, Electrical and Instrumentation works of minimum One (1) No. WwTP of 12 MLD capacity and above or Two (2) Nos. Waste Water Treatment Plants of minimum 6 MLD capacity with Biological Nutrient Removal (BNR) technology of process like A2O, EA, IFAS, MBBR, SBR with SCADA Integration to meet effluent standard as BOD < 10 mg/L, COD < 50 mg/L, TSS < 10 mg/L, TN < 10 mg/L, TP < 1 mg/L and fecal coliform < 100MPN/100ml should be in operation for a period of one year during the last 5 years as on date of Bid submission	As per the NGT norms the Total Suspended Solid (TSS) value should be TSS < 20 mg/L, hence we kindly request to consider TSS < 20 mg/L instead of TSS < 10 mg/L (In-support of this we are accompanying order copy of the National Green Tribunal Principal Bench, New Delhi date of hearing 30.04.2019).	Refer Addendum-1
269	Vol II, 5.19.1 for Works-A	pH - 6.5-7.5 BOD- 350 mg/l COD-800 mg/l TSS-450 mg/l VSS-360 mg/l TKN-70 mg/l NH4-N- 45 mg/l Total Phosphorous- 7 mg/l	The influent parameters which are mentioned are not as per CPHEEO. Pl confirm the values that to be considered for design for individual STP.	Tender Conditions Prevails.
270	Vol II, 1.3 Components List for Works-A,		Is the provision of a Disc Cloth Filter, Ultrafiltration (UF) system, and Odour Control Unit mandatory for every individual STP?	Tender Conditions Prevails. The requirement of a Disc Filter, Ultrafiltration (UF) system, and Odour Control Unit for respective WwTPs shall be as defined in the tender document.
271	Vol II, 1.3 Components List for Works-A,	EA Process, or IFAS Process, or MBBR Process, or SBR Process, incorporating biological nitrification, de-nitrification, and phosphorus removal. All these process options shall be followed by Disc filters, Chlorine Disinfection and Mechanical Sludge Dewatering. As defined.	UF system is not mentioned here. Pls confirm the scope of UF.	Yes confirmed UF Treatment system is already mentioned in this Tender package. Tender Conditions Prevails.
272	Vol II, 5.14.6 Tanker Filling Station	Contractor shall provide the facilities for tanker filling by installing dedicated "treated water transfer pumps" as specified in Paragraph 5.19.	Is Tanker Filling Station required at every STP?	Tender Conditions Prevails. Tanker filling station is required for each WwTP.
273		Further the WwTP locations (refer Paragraph 5.19.) where the reuse facilities are not specified, then a dedicated ultrafiltration unit with disinfection facilities shall be installed for the tanker filling station of the WwTP (Capacity shall be same as treated water transfer pumps) to ensure the treated water meets all the time stringent re-use standards and non-detectable fecal coliform levels before being loaded into the tankers. For capacity of treated water transfer pumps refer Paragraph 5.19.	We presume that UF treated water would be used in Filling Stations.	Tender Conditions Prevails. The requirement shall be as defined in the Tender document.
274	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 10 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic & Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Condition Prevail.
275	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 12 for Works-A		Kindly allow Sub Surface Submersible mixers make Euroteck for Anaerobic & Anoxic tanks for easy Operation & Maintenance. Please Confirm for Individual STP	Not Acceptable, Tender Condition Prevail.


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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																											
276	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 22 for Works-A		Kindly include EKOTON makefor the Fine Bubble (LDPE) Diffusers in the approved make list. Please Confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																											
277	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 24 for Works-A		Kindly include Euroteck/EKOTON makefor the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																											
278	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 26 for Works-A		Kindly include Euroteck/EKOTON makefor the Mechanical screens (bar type) in the approved make list. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																											
279	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 40 for Works-A		Kindly include Euroteck/MITA make for the Disc Filters in the approved make list. Please Confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																											
280	Vol II, 8.38 Approved Vendor/Manufacturer/Make List-Mechanical Equipment Sno. 5 for Works-A		Kindly include Screw Press/ Belt Filter Press for Dewatering of sludge Euroteck/Ekoton Makewhich consumes less power. Please Confirm for Individual STP	Not Acceptable, Tender Conditions Prevails.																											
281	General		Kindly include Sub Surface Aerators in Aeration Zone. Aerators are much more energy efficient and Operation & Maintenance is easy compared to Diffused Aeration. Please Confirm. Further we request to add AIRE-O2 make for the Sub Surface Aerators in the approved make under Approved make list Sub Surface Aerator as an additional item.	Tubular type Air Diffuser system is only allowed, other type of Diffuser for Aeration zone is Not Acceptable, Tender Conditions Prevails.																											
282	General		Kindly include Integrity Municipal Systems (IMS)- I-BOX® Make for Odor control Unit. Please confirm for individual STP.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.																											
283	General		Request you to include helical hybrid blowers which are energy efficient and high speed blower very well suited in the aeration	Tender Conditions Prevails.																											
284	Volume-2 /Section-7,Part 5 -37 & Page5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>pH</td><td></td><td>6.5-7.5</td></tr><tr><td>BOD</td><td>mg/L</td><td>350</td></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr><tr><td>TSS</td><td>mg/L</td><td>450</td></tr><tr><td>VSS</td><td>mg/L</td><td>360</td></tr><tr><td>TKN</td><td>mg/L</td><td>70</td></tr><tr><td>NH4-N</td><td>mg/L</td><td>45</td></tr><tr><td>Total Phosphorus</td><td>mg/L</td><td>7</td></tr></table>	Influent Wastewater Characteristics			pH		6.5-7.5	BOD	mg/L	350	COD	mg/L	800	TSS	mg/L	450	VSS	mg/L	360	TKN	mg/L	70	NH4-N	mg/L	45	Total Phosphorus	mg/L	7	As per the clause referenced in the tender document, the BOD value of 350 mg/L corresponds to a COD of 800 mg/L, which indicates a relatively high COD/BOD ratio. Typically, as per CPHEEO guidelines, a BOD of 250 mg/L with a COD of 425 mg/L is considered standard. We assume that the sewage does not contain any industrial effluent and that the COD is primarily biodegradable. Kindly confirm	The design influent parameters requirement shall be as defined Part 5, Volume 2/ Section 7, "TSPS & WwTPs Design / Sizing Criteria".
Influent Wastewater Characteristics																															
pH		6.5-7.5																													
BOD	mg/L	350																													
COD	mg/L	800																													
TSS	mg/L	450																													
VSS	mg/L	360																													
TKN	mg/L	70																													
NH4-N	mg/L	45																													
Total Phosphorus	mg/L	7																													
285	Volume-2 /Section-7,Part 5 -37 & Page5-79	<table><tr><th colspan="3">Influent Wastewater Characteristics</th></tr><tr><td>COD</td><td>mg/L</td><td>800</td></tr></table>	Influent Wastewater Characteristics			COD	mg/L	800	We presume that there is no ingress of industrial effluent in the sewage, and that more than 95% of the COD is biodegradable, with less than 5% being nonbiodegradable. Alternatively, the treated effluent COD performance requirements may be considered for relaxation, provided the Contractor can demonstrate that a portion of the influent COD is non-biodegradable and cannot be removed using the existing treatment processes at theWorks. Kindly confirm.	Bidder may consider Non-biodegradable COD as per the bidder design.																					
Influent Wastewater Characteristics																															
COD	mg/L	800																													

Team Leader

PMC : TCE - NJSEI (JV) Consultants
KWSDRP - BWSSBCE (Project)
BWSSB

Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
286	Volume-1 / Page17 of 234	Construction Experience- PipelineThe bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 years as on date of bid submission involving minimum length of 27 Km.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
287	Volume-1 / Page17 of 234	(vi) Construction Experience Trenchless WorksThe tenderer must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for executing trenchless work 600mm dia and above MS casing pipe of minimum 100 meters in one year during the last 5 years as on date of bid submission.	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
288	Volume-1 / Page17 of 234	(iv) Experience in Power Generating FacilityThe Tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of at least One (1) No. Waste water Treatment Plant of 28 MLD capacity with power Generating Facility of minimum 480 kw per hour from Anaerobic Digestion and in operation for One year in last five years as on date of bid submission	We would like to bring to your attention that only a limited number of bidders are currently able to qualify under the existing criteria. The specific requirements, particularly regarding the construction experience, are preventing several competent bidders from meeting the overall qualification standards. In light of this, we respectfully request that you consider permitting bidders to submit a Memorandum of Understanding (MoU) with a specialist subcontractor who meets the required qualifications. We believe this approach would promote fair competition and enable capable teams to participate more effectively. Kindly confirm.	Not Acceptable, Tender Conditions Prevails
289	Volume-1 / Page16 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i) 3.1.2. (b) (i) Experience in Execution of WwTPsThe tenderer as a sole entity or a Lead Partner and or Partner in a Joint Venture shall have successfully completed, including Design, Procurement, Supply, Installation, Construction, Testing, and Commissioning of all Civil, Mechanical, Electrical, and Instrumentation Works of minimum One (1) No. WwTP of 52 MLD capacity and above or Two (2) Nos. of Waste Water Treatment Plants of minimum 26 MLD capacity with Biological Nutrient Removal (BNR) technology of process like , A2O, EA, IFAS, MBBR, SBR, with SCADA Integration, to meet effluent standard as BOD ≤ 10mg/L, COD ≤ 50 mg/L, TSS ≤ 10 mg/L, TN ≤ 10 mg/L, TP ≤ 1 mg/L and fecal MPN/100 ml and should be in operation for a period of one year during the last 5 years as on date of Bid submission.	As per the Tender document, the Technology Provider is required to demonstrate that they have successfully supplied the specified technology for at least one Wastewater Treatment Plant (WWTP), as outlined in clause 3.1.2 (b)(i). We understand that this clause refers to the effluent quality at the final discharge point of the Sewage Treatment Plant (STP), rather than immediately following the secondary treatment stage. Accordingly, to demonstrate compliance, the Technology Provider for these secondary treatment system must ensure that the final treated effluent meets the following parameters, as specified—excluding fecal coliform: • BOD ≤ 10 mg/L • COD ≤ 50 mg/L • TSS ≤ 10 mg/L • Total Nitrogen (TN) ≤ 10 mg/L • Total Phosphorus (TP) ≤ 1 mg/L Kindly confirm.	Refer Addendum-1
290	Volume-1 / Page14 of 234	Technology provider shall provide the evidence that he has successfully supplied the technology for at least 1 (One) WWTP same as 3.1.2 (b)(i)	As per the Tender document, the Technology Provider must submit evidence of having successfully supplied the technology for at least one (1) wastewater treatment plant (WWTP), in accordance with Clause 3.1.2(b)(i). We observe that the clause does not clearly specify the required capacity of the reference WWTP. However, it is our understanding that the Technology Provider is expected to demonstrate experience in supplying the technology for at least one (1) WWTP of 52 MLD capacity, as per the intent of Clause 3.1.2(b)(i). Kindly confirm.	Tender Conditions Prevails.
291	Volume-2 / Section-7, Part 5 - 64 & Part 5-90	N-1 condition: - The Bidder shall provide calculations for operating the WwTP at Design Flow with 1 SBR tank offline for maintenance.	In the earlier BWSSB tender—specifically the CP25 package and the 10 MLD STP at Jakkur, which adopted SBR technology—this particular clause was omitted. We presume that a similar approach will be adopted for the current tender as well. Kindly confirm.	Tender Conditions Prevails.

Tear Leader

Response to Pre-Bid Queries

NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS – B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)										
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply						
292	Volume-2 /Section-7,Part 5 - 64 Volume-2 /Section-7,Part 5-90	HRT at average flow: 24 Hrs.HRT at average flow: 16.8 Hrs.	Hydraulic Retention Time (HRT) is a derived parameter based on the selected SBR cycle time and the inlet sewage characteristics. We understand that the HRT should be determined in accordance with the process requirements and the Technology Provider's recommendations to meet the effluent quality standards specified in the tender. Kindly confirm.	Tender Conditions Prevails.						
293	Volume-2 /Section-7,Part 5 -66 & Part 5-91	Maximum Decanter Weir loading rate: 120 m ³ /h/m	In the earlier BWSSB tenders for CP25, CP26, and CP27 packages based on SBR technology, the maximum decanter weir loading rate was specified as 125 m ³ /h/m (Addendum-8). We assume that this same rate will be applicable to the current tender as well. Kindly confirm.	Tender Conditions Prevails.						
294	Volume-2 /Section-7,Part 8 - 100	Decanters (For SBR system)	We assume that all decanter specifications will be acceptable based on the technology provider's standards specifications, as the bidder is required to submit the technology tie-up agreement in the technical bid. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.						
295	Volume-2 /Section-7,Part 8 - 100	Decanters (For SBR system) All the withdrawal SS 316L Pipes shall be of thickness not less than Schedule 20S above 200 mm and Schedule below 200 mm shall be of Schedule 40S, and all the pipes shall be of Seamless type only.	It is presumed that the decanter mechanism forms an integral part of the technology components. Additionally, the bidder is required to submit the Technology Tie-Up Agreement as part of the technical bid. Accordingly, the pipe schedule(s) mentioned under the decanter specifications shall not be applicable to the decanter system. Kindly confirm.	Tenderer or Technology supplier can adopt with his own Patent concept of Decanter Equipment, but has to justify such thickness adopted for the steel member with suitable Structural Analysis Report for the fabricated Steel Structure of Decanter Mechanism.						
296	Volume-2 /Section-7,Part 5 -67 & Part 5-92	8. Process Air Blowers α: Oxygen Transfer Correction Factor - 0.6 β: Salinity - Surface Tension Correction Factor - 0.95 F: Fouling Factor - 0.8	The factors provided in the tender document—Alpha, Beta, and the Fouling Factor—are dependent on the type of diffuser, material of construction (MoC), and self-cleaning capacity, which can vary within the range specified in the latest edition of Metcalf and Eddy. Therefore, we assume that these factors can be considered in accordance with the latest edition of Metcalf and Eddy for designing the aeration system. Kindly confirm.	Tender Conditions Prevails.						
297	Volume-2 / Section-7,Part 8 -83 to Part 8-186 Volume-2 / Section-7,Part 8 -101 to Part 8 - 103	8.18 Aeration system with allied Equipments 8.18.1 Tubular Type Diffusers & 8.18.15.2 Diffuser system for IFAS 8.18.15.3 Type of Diffuser System 8.18.15.4 Diffuser Elements 8.18.15.5 Testing for Diffuser system 8.18.15.6 Air Piping to Diffusers	The Tender document specifies two different diffuser specifications as outlined in the referenced clause. We understand that the diffuser specifications provided in Clause 8.18.15.2 to 8.18.15.6 are applicable to the aeration system for all secondary treatment processes where diffused aeration is used. Kindly confirm.	Diffuser specification shall be as per Cl.no.8.18.1 only and Cl.no. 8.18.15.2 to 8.18.15.6 stands deleted Refer Addendum-1						
298	Volume-2 /Section-7,Part 8 - 91	<table><tr><th>Sl.no.</th><th>Description</th><th>Material of Construction</th></tr><tr><td>f</td><td>Acoustic enclosure</td><td>Al-Zn coated steel, insulated with glass wool</td></tr></table>	Sl.no.	Description	Material of Construction	f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool	Recently, various materials of construction (MOC) for acoustic enclosures for turbo air blowers have become available. We kindly request permission for the tenderer to provide an acoustic enclosure for the turbo blower based on the manufacturer's standard MOC. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
Sl.no.	Description	Material of Construction								
f	Acoustic enclosure	Al-Zn coated steel, insulated with glass wool								
299	Volume-2 /Section-7,Part 8 - 188	40 Disc Filtration System List of Approved Suppliers: Manufacturer for Disc Filter: M/s Hydro Tech M/s Xylem M/s Estragua M/s Jash Invent M/s Huber M/s Aqua Aerobics M/s Evoqua water Technologies	M/s Yuchon has been accepted as a disc filter supplier in several previous BWSSB tenders, including the STP packages of CP-25, 26 and 27, 10 MLD STP at Jakkur, 10 Komaghatta, 13 MLD Byrathi Kanne. Therefore, we assume that the tenderer can propose M/s. Yuchon Fiber Disc Filter for this tender. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as an alternate vendor.						
300	Volume-2 /Section-7,Part 5 -70 & Part 5-94	DISC FILTER Design flow per unit: Designed for 100% Peak Flows including recycle flows - Irrespective process	We understand that the design flow for the disc filter unit should be based on the maximum incoming flow to the unit. In the case of the SBR system, the FDF unit should be designed based on the average flow or the decant flow, whichever is higher. Kindly confirm.	Tender Conditions Prevails.						

Team Leader

 PMC : TCE - NJSEI (JV) Consultants
 KWSDRP - BWSSB

 CE (Project)
 BWSSB

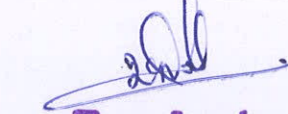
Response to Pre-Bid Queries

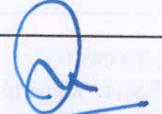
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)

Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																																	
301	Volume-2 /Section-7,Part 1 -12 Volume-2 /Section-7,Part 5-37 Volume-2 /Section-7,Part 5-79	<table><thead><tr><th>Parameters</th><th>Unit</th><th>Value</th></tr></thead><tbody><tr><td colspan="3">TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE</td></tr><tr><td>pH - Instantaneous range</td><td>-</td><td>6.5-8.0</td></tr><tr><td>BOD₅ at 20°C - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>COD - Maximum monthly average</td><td>mg/L</td><td>50</td></tr><tr><td>TSS - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>TN - Maximum monthly average</td><td>mg/L</td><td>10</td></tr><tr><td>Total Phosphorus - Maximum monthly average</td><td>mg/L</td><td>1</td></tr><tr><td>Residual Chlorine - Instantaneous</td><td>mg/L</td><td>1</td></tr><tr><td>Fecal Coliform – Maximum Monthly average</td><td>MPN/100 mL</td><td>100</td></tr><tr><td>Fecal Coliform – Ceiling Limit (in any day)</td><td>MPN/100 mL</td><td>230</td></tr></tbody></table>	Parameters	Unit	Value	TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE			pH - Instantaneous range	-	6.5-8.0	BOD ₅ at 20°C - Maximum monthly average	mg/L	10	COD - Maximum monthly average	mg/L	50	TSS - Maximum monthly average	mg/L	10	TN - Maximum monthly average	mg/L	10	Total Phosphorus - Maximum monthly average	mg/L	1	Residual Chlorine - Instantaneous	mg/L	1	Fecal Coliform – Maximum Monthly average	MPN/100 mL	100	Fecal Coliform – Ceiling Limit (in any day)	MPN/100 mL	230	As per the tender document, the treated effluent quality parameters such as BOD, COD, TSS, TN, and TP are expected to be achieved at the outlet of the biological treatment process (e.g., SBR). Therefore, a Disc Filter is not required solely to meet these parameters. Accordingly, we understand that the provision of a Disc Filter shall be based on the process requirement. Kindly confirm.	Tender Conditions Prevails.
Parameters	Unit	Value																																			
TREATED EFFLUENT QUALITY REQUIREMENTS - DISCHARGE																																					
pH - Instantaneous range	-	6.5-8.0																																			
BOD ₅ at 20°C - Maximum monthly average	mg/L	10																																			
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TN - Maximum monthly average	mg/L	10																																			
Total Phosphorus - Maximum monthly average	mg/L	1																																			
Residual Chlorine - Instantaneous	mg/L	1																																			
Fecal Coliform – Maximum Monthly average	MPN/100 mL	100																																			
Fecal Coliform – Ceiling Limit (in any day)	MPN/100 mL	230																																			
302	Volume-2 /Section-7,Part 8 - 165	Disc Filter	The specifications provided for Disc Filters appear to be specific to a particular vendor and are aligned with the offerings of only one or two vendors listed in the approved vendor list. Accordingly, we understand that the Disc Filter specifications shall be deemed acceptable as per the approved vendor's standard design. Kindly confirm.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as an alternate vendor.																																	
303	Volume-2 /Section-7,Part 8 - 166	Filter Membrane: Stainless steel screen / Mesh: SS-316L	In previous BWSSB tenders, Polyester filter cloth or SS316 with 10 microns mounted on a Poly Propylene Glass/ABS frame was allowed in previous tenders like 10MLD Komaghatta, 13MLD Bairathi Khanne & CP-25,26 & 27. Hence, we assume that the tenderer can also provide filter membranes made from polyester cloth or SS316 material for this tender. Kindly confirm.	Tender Conditions Prevails.																																	
304	Volume-2 /Section-7,Part 8 – 166	 the automatic valve and suction cleaning pump which shall be	This type of arrangement was not mentioned in several BWSSB tenders, such as the 10MLD Komaghatta, 13MLD Bairathi Khanne & CP-25, 26 & 27. Therefore, we understand that this arrangement should also be acceptable for the current tender.	For automatic BackWash operation this valve is suggested in fully submerged Disc filters, tenderer can follow alternative arrangement as per vendor recommendation, considering auto operation system of Backwashing based on clogging alarm.																																	
305	Volume-2 /Section-7,Part 8 - 167	Protective Top Cover and Body cover along with frame structure :SS316 (Minimum 4mm for Body cover)	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a cover will be acceptable. Kindly confirm.	In cl.no. 8.35, Table "Technical Particulars Common for both Partially Submerged or Fully Submerged type Disc Filtration System", Tenderer can consider the specification, based on his design adopted either of two system. RCC structure as defined in the tender document is mandatory for both the system.																																	
306	Volume-2 /Section-7,Part 5 -70 & Part 5-94	DISC Filter building	As per the tender document, we are proposing a fully submerged fiber disc filter. This type of filter does not require any covering, shed, or RCC roof. Therefore, we assume that a fully submerged fiber disc filter without a roof will be acceptable.	Tender Conditions Prevails.																																	
307	Volume-2 /Section-7, Part 5-109	15.22.3 Greenhouse Solar Sludge Drying System for 10 MLD WwTP at U M Kaval <table><tr><td>Material</td><td>Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets. In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.</td></tr></table>	Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets. In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.	We understand that the material of construction (MOC) for all parts in contact with sludge shall be SS316L, while all other components may be as per the vendor's standard manufacturing specifications. Kindly confirm.	Tenderer can consider as Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets, In particular, combs, knives, shovels, shaft, covers shall be SS 316L including fasteners and all other parts shall be made of minimum SS 304 Steel material. All stainless steel components must undergo pickling and passivation processes.																															
Material	Complete system including travelling bridge with sludge turning device, shapes (rods, angles, and channels), pipes, and sheets. In particular, combs, knives, shovels, shaft, covers, including fasteners and all other parts shall be made of AISI 316L stainless steel material.																																				
308	Volume 2, Page no. TECHNICAL SCHEDULE X FUNCTIONAL GUARANTEE OF THE PLANT, Page no. Technical Schedule X- 3	a) Energy Consumption for TSPS, WwTP with ReusePCA $= \{ \{ PCD \} * \{ (0.42 * QA/QD) + (0.24 * BA/BD) + (0.24 * TA/TD) + (0.1 * NA/ND) \} \}$ a) Energy Consumption for TSPS, WwTP without ReusePCA $= \{ \{ PCD \} * \{ (0.4 * QA/QD) + (0.24 * BA/BD) + (0.24 * TA/TD) + (0.1 * NA/ND) \} \}$	The specified formula for energy consumption is not applicable in the case of the Terminal Sewage Pumping Station (TSPS), as energy usage in this context is based on the volume of sewage pumped rather than on pollutant load parameters such as BOD, TSS, or TKN. Accordingly, we understand that the formula provided for calculating energy consumption for the Intermediate Sewage Pumping Station (ISPS) should also apply to the TSPS. Kindly confirm.	Tender Conditions Prevails.																																	

Team Leader

Response to Pre-Bid Queries				
NAME OF PROJECT : DESIGN, ENGINEERING, CONSTRUCTION AND COMMISSIONING OF WASTEWATER TREATMENT PLANTS WITH TERTIARY TREATMENT FACILITY, BIOGAS GENERATION & SOLAR SLUDGE DRYING BED AND INTERMEDIATE SEWAGE PUMPING STATION ALONG WITH OPERATION & MAINTENANCE THEREOF FOR TEN YEARS [WORKS - A] AND PROCUREMENT AND CONSTRUCTION OF RISING MAIN, MAIN SEWERS AND LATERALS INCLUDING MACHINE HOLES AND LIFT SEWAGE PUMPING STATIONS [WORKS - B] HYBRID MODE FOR BOMMANAHALLI ZONE IN 110 VILLAGE AREAS (Phase II) UNDER KARNATAKA WATER SECURITY AND DISASTER RESILIENCE PROGRAM (KWSDRP) – (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)				
Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
309	Volume-2 /Section-7,Part 5 -69 & Part5-93	ALUM DOSING SYSTEM (FOR ALL TREATMENT PROCESSES)	As stated in the tender, an alum dosing system is required for chemical phosphorus removal. However, we assume that if the Total Phosphorus ≤ 1 mg/L, as specified in the tender, is achieved biologically through the Biological Nutrient Removal process, then the alum dosing system will not be necessary. Therefore, the alum dosing system should be considered optional and provided only if required, based on the process requirements to achieve Total Phosphorus ≤ 1 mg/L. Kindly confirm.	Tender Conditions Prevails.
310	Volume-2 /Section-7,Part 3-13 & 3-14	3.16.4 Bid Drawings and Details (a) General and Process, (b) Mechanical (c) Electrical & Instrumentation	The tender specifies a large number of documents for submission. It is not feasible to submit all these documents at the bidding stage. We understand that the submittals under the categories a) General and Process shall be provided during the bidding stage, while all other documents will be submitted after the award of the contract. Kindly confirm.	The Tenderer shall submit all the documents specified under the clause 3.16.4 Bid Drawings and Details for (a) General and Process, (b) Mechanical, (c) Electrical & Instrumentation. However, the "To-scale dimensional layout and/or installation drawings" as specified under the clause 3.16.4 (b) Mechanical (i) can be omitted during the bidding stage. However, Tenderer shall provide an undertaking for non-submission.
311	Volume – 4 Drawings	Proposed Plot Plan	We kindly request that the proposed plot plan be provided in AutoCAD format.	Refer Addendum-1
312	Volume-2 /Section-7,Part 5 -48 & Part5-88 Volume-2 /Section-7,Part 5 -54 Volume-2 /Section-7,Part 5 -61	SECONDARY CLARIFIERS (EA PROCESS) SECONDARY CLARIFIERS (IFAS PROCESS) SECONDARY CLARIFIERS (MBBR PROCESS)	The tender states that the bidder must provide calculations for operating the WWTP at design flows with one tank/unit/module offline for maintenance. We assume that this requirement also applies to secondary clarifiers. Kindly confirm.	Tender Conditions Prevails.
313	Volume-2 /Section-7,Part 8 –120	8.20 Primary/Secondary Clarifiers	We understand that all wetted parts of the Primary and Secondary Clarifiers shall be made of SS 316L, considering the 10-year operation and maintenance period. Kindly confirm.	Superior material than specified in the tender can be adopted with justification and without any cost implication to BWSSB.
314	Volume-2 /Section-7, Part 5-98	GRAVITY SLUDGE THICKENER	In recent times, various types of mechanical sludge thickeners have become available, offering improved sludge thickening performance compared to gravity thickeners. Therefore, we kindly request that the tenderer be allowed to propose either mechanical or gravity thickeners, based on the process requirements for the Anjanapura WWTP. Kindly confirm.	Tender Conditions Prevails.
315	Volume 2/Section 7, Part 7-54 & part 7-56	PLC shall be provided as a Hot Stand-by Controller	We understand that a redundant PLC system has been specified to prevent extended interruptions in plant operations and control. Alternatively, the same level of reliability can be ensured by using a standard non-redundant PLC system, supported by pre-programmed spare components such as CPU, power supply, etc. In the unlikely event of a PLC failure, the system can be restored within 1–2 hours using these spares. Kindly confirm whether a non-redundant PLC with essential pre-programmed spares is acceptable.	The Plant master controller station shall be provided with two identical central processors configured such that they operate in Hot-Standby mode. The system shall be designed and implemented such that when the Main processor fails, the Standby one shall automatically take over. The changeover shall be seamless, smooth and without any time delay and this Hot-Standby feature is to be proposed for WwTP SCADA control room as per Clause No.13.27.d), Part-13, Volume-2 of the Tender Document. Hence, the Tender Condition Prevails.

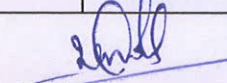

Team Leader
PMC: TCE - NJSEI (JV) Consultants
KWSDRP - BWSSB


CE (Project)
BWSSB

Response to Pre-Bid Queries

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316	Volume 2/Section7, Part 7-54 & part7-56	7.13.1Redundant SCADA Dual redundant SCADA system and Historian softwareOperator work Station, loaded with Runtime SCADA ServerSCADA Operator work station with licensed SCADA softwareSCADA Engineering work station with licensed SCADA software	The operators available at the STP are generally nottrained to carry out programming or modifications in theSCADA system, and allowing them to do so may poseoperational risks. SCADA modifications require expertprogrammers who possess the necessary licenses andskills. Therefore, we kindly request that only runtimesoftware for SCADA be considered.Kindly confirm.	The PLC cum SCADA softwares capable of modification on Control System Logic updation cum SCADA Screen Graphics during run time without any impact on WwTP Process. The Control Logic & SCADA Graphics screens tested & witnessed during Factory Acceptance Test (FAT) at authorized Original Equipment Manufacturer's (as per approved OEMs list in Part-13) workshop and PLC Logics cum SCADA Graphics Screens in line with approved Plant Operational control philosophy prior to dispatch to site as per Clause No. 14.19.B, Part-14 of tender document. Hence, the critical logic updations are not allowed at site only minor modifications shall be updated through authorized licensed programmer of original equipment manufacturer's for which necessary training provided by authorized licensed programmer to the O&M team as per Clause no.15.1.6, Part-15 in tender document. The SCADA shall be a fully dual redundant microprocessor based computer system such that reliable and fully automatic plant control can be achieved by using Hot-Standby PLC system. The SCADA software functions are to be complied as per clause nos.13.27,13.34 & 13.35, Part-13 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.																								
317	Volume-2 /Section-7,Part 7 -56	Historian Software	As alarms and trends are already stored within thecomputer-based SCADA system, which includes aninbuilt SQL server, a separate historian system is notnecessary. Therefore, we request you to consider a PLCand SCADA system without the requirement for aseparate historian.Kindly confirm.	In addition with Redundant SCADA system,the Historian software system shall be designed and configured to store data for a minimum of seven years data retrieval as per Clause No.7.13.4, Part-7 in Volume-2 of the tender document. Hence, the Tender Conditions Prevails.																								
318	SECTION 2,INSTRUCTIONSTO TENDERERS(ITT)Page 16 of 234	3.1.2. (b)(ii)Construction Experience- Reuse Plant (with Tertiary Level)---	The proposed tertiary treatment technology is theultrafiltration (UF) process. Given that the UF system is acritical component of the TTP and that the overall systemguarantee is closely tied to membrane design andtechnology, it should be mandatory for the bidder to enterinto a tie-up with a qualified membrane supplier.Accordingly, we propose the following qualificationrequirement:"The bidder must establish a tie-up with the ultrafiltrationmembrane supplier or its authorized distributorand submit a Technology Tie-up Agreement as part ofthe technical bid. The membrane supplier or itsauthorized distributor must have experience in supplyingthe proposed ultrafiltration system for at least one (1)tertiary treatment plant of minimum 17.5 MLD capacity(net output) in India for any State/Central Governmentorganization or ULB, which has been operational andperforming satisfactorily for a minimum of two years asof the tender calling date. A performance certificate fromthe end user, certified by an officer not below the rank ofExecutive Engineer, must be submitted."Kindly confirm.	Tender Conditions Prevails.																								
319	SECTION 2,INSTRUCTIONSTO TENDERERS(ITT)Page 16 of 234	3.1.2. (b)(ii)Construction Experience- Reuse Plant (with Tertiary Level)---The Reuse Plant (with Tertiary Treatment) have to meet followingcriteria for the treated effluent <table><tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2</td></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr><tr><td>BOD</td><td>mg/l</td><td>< 5</td></tr><tr><td>COD</td><td>mg/l</td><td>< 30</td></tr><tr><td>TP</td><td>mg/l</td><td>< 1</td></tr><tr><td>Fecal Coliform</td><td>mg/l</td><td>NIL</td></tr></table>	Parameter	Unit	Specified Maximum Concentration	Turbidity	NTU	< 2	TDS	mg/l	< 1000	TN	mg/l	< 5	BOD	mg/l	< 5	COD	mg/l	< 30	TP	mg/l	< 1	Fecal Coliform	mg/l	NIL	The proposed technology for tertiary treatment isultrafiltration. As per the tender, bidders are required tohave experience in reuse plants with a Total Nitrogen(TN) guarantee of < 5 mg/L. However, in reuse plantsusing treated sewage, a TN guarantee of < 5 mg/L cannotbe ensured after the ultrafiltration process. This isbecause total nitrogen removal in ultrafiltration systemsis incidental to the removal of suspended solids.Therefore, we kindly request that the TN guaranteerequirement at the outlet of the tertiary treatment plant beadjusted to < 10 mg/L or as arising from the experiencecriteria.Kindly confirm	Refer Addendum-1
Parameter	Unit	Specified Maximum Concentration																										
Turbidity	NTU	< 2																										
TDS	mg/l	< 1000																										
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BOD	mg/l	< 5																										
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320	SECTION 2,INSTRUCTIONSTO TENDERERS(ITT)Page 16 of 234	3.1.2. (b)(ii)Construction Experience- Reuse Plant (with Tertiary Level)The Reuse Plant (with Tertiary Treatment) have to meet followingcriteria for the treated effluent <table><tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2</td></tr><tr><td>TDS</td><td>mg/l</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr><tr><td>BOD</td><td>mg/l</td><td>< 5</td></tr><tr><td>COD</td><td>mg/l</td><td>< 30</td></tr><tr><td>TP</td><td>mg/l</td><td>< 1</td></tr><tr><td>Fecal Coliform</td><td>mg/l</td><td>NIL</td></tr></table>	Parameter	Unit	Specified Maximum Concentration	Turbidity	NTU	< 2	TDS	mg/l	< 1000	TN	mg/l	< 5	BOD	mg/l	< 5	COD	mg/l	< 30	TP	mg/l	< 1	Fecal Coliform	mg/l	NIL	As per the tender, bidders are required to have experiencewith reuse plants that meet a Total Dissolved Solids(TDS) guarantee of < 1000 mg/L. However, TDSremoval is typically achieved in reuse plants withReverse Osmosis (RO) systems. Since the technologyproposed for tertiary treatment in this tender isultrafiltration, which does not remove TDS, we kindlyrequest the deletion of the TDS experience criteria or thatthe TDS values be considered as “As Arising.”Kindly Confirm..	Refer Addendum-1
Parameter	Unit	Specified Maximum Concentration																										
Turbidity	NTU	< 2																										
TDS	mg/l	< 1000																										
TN	mg/l	< 5																										
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COD	mg/l	< 30																										
TP	mg/l	< 1																										
Fecal Coliform	mg/l	NIL																										
321	TSPS & WwTPsDesign / SizingCriteriaPart 5-37 / 5-80&Part 5-73 / 5-96	TREATED EFFLUENT QUALITY REQUIREMENTS FORREUSE (APPLICABLE AS SPECIFIED)&Reuse Facilities: <table><tr><th>Item/Parameter/Descriptio n</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>TN</td><td>mg/l</td><td>< 5</td></tr></table> <table><tr><th>Item/Parameter/Descriptio n</th><th>Units</th><th>WwTP at Kaval/Anjana pura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids,</td></tr></table>	Item/Parameter/Descriptio n	Units	WwTP at Kaval/ Anjanapura	TN	mg/l	< 5	Item/Parameter/Descriptio n	Units	WwTP at Kaval/Anjana pura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids,	As per the tender, the proposed technology for tertiarytreatment is the ultrafiltration process. Ultrafiltrationmembranes are designed to remove suspended solids,bacteria, and viruses, as outlined in Part 5-73 / 5-96 ofthe tender. Therefore, nitrogen removal in ultrafiltrationsystems is incidental to the removal of suspended solidsand cannot be guaranteed.In light of this, we kindly request that the Total Nitrogenremoval guarantee at the outlet of the tertiary treatmentplant after ultrafiltration be set to < 10 mg/L orconsidered as "As Arising."Kindly Confirm..	The design effluent quality requirement for Reuse shall be as defined in the tender document.												
Item/Parameter/Descriptio n	Units	WwTP at Kaval/ Anjanapura																										
TN	mg/l	< 5																										
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Item/Parameter/Descriptio n	Units	WwTP at Kaval/ Anjanapura																										
TDS	mg/l	< 1000																										
Item/Parameter/Descriptio n	Unit s	WwTP at Kaval/ Anjanapura																										
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses																										
323	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwT P at Anjanapura</th></tr><tr><td>Reuse Flow</td><td>MLD</td><td>5</td><td>17.50</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwT P at Anjanapura	Reuse Flow	MLD	5	17.50	We assume that the "Reuse Flow" refers to the flow atthe outlet of the Ultrafiltration Plant (Permeate Flow).Kindly confirm.	Refer Addendum-1																
Item/Parameter/Description	Units	WwTP at Kaval	WwT P at Anjanapura																									
Reuse Flow	MLD	5	17.50																									

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324	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP at Anjanapura</th></tr><tr><td>No of Membrane Trains</td><td>Nos</td><td>3</td><td>5</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura	No of Membrane Trains	Nos	3	5	The term "trains" is typically used for pressurizedultrafiltration systems and does not apply to submergedultrafiltration systems, where the membrane modules areimmersed in tanks or cells. Therefore, we assume that inthe specified clause, the term "trains" refers to "cells ortanks" for submerged ultrafiltration systems.Additionally, the number of cells or tanks will be as perthe recommendation of the UF vendor.Kindly confirm.	Tender Conditions Prevails.				
Item/Parameter/Description	Units	WwTP at Kaval	WwTP at Anjanapura													
No of Membrane Trains	Nos	3	5													
325	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Descriptio n</th><th>Units</th><th>WwTP at Kaval</th><th>WwTP at Anjanapura</th></tr><tr><td>No of Feed Pump/Permeate Pump (Working)</td><td>Nos</td><td>2</td><td>4</td></tr><tr><td>Capacity of each feed pump / permeate pump</td><td>m³/hr</td><td>125</td><td>220</td></tr></table>	Item/Parameter/Descriptio n	Units	WwTP at Kaval	WwTP at Anjanapura	No of Feed Pump/Permeate Pump (Working)	Nos	2	4	Capacity of each feed pump / permeate pump	m³/hr	125	220	The tender specifies the number of working feedpumps/permeate pumps as 2 for the Kaval site and 4 forthe Anjanapura site. However, the actual number ofworking pumps may vary based on the UF vendor'sdesign and the type of UF system(submerged/pressurized). Therefore, we request that thenumber and capacity of feed pumps/permeate pumps beallowed to follow the UF vendor's recommendation.Kindly confirm.	Tender Conditions Prevails.
Item/Parameter/Descriptio n	Units	WwTP at Kaval	WwTP at Anjanapura													
No of Feed Pump/Permeate Pump (Working)	Nos	2	4													
Capacity of each feed pump / permeate pump	m³/hr	125	220													
326	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Minimum UF Plant Recovery</td><td>%</td><td>95</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura	Minimum UF Plant Recovery	%	95	The maximum recovery achievable through UF systemsis approximately 93-94%. Any additional recovery ispossible only through the installation of extra UFbackwash recovery systems that treat UF backwash wasteand make it available for reuse.Since surplus flow is available at the inlet of the UFplant, we request that a minimum recovery of 93% beallowed for the UF plants.Kindly confirm.	Refer Addendum-1						
Item/Parameter/Description	Units	WwTP at Kaval/ Anjanapura														
Minimum UF Plant Recovery	%	95														
327	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Descriptio n</th><th>Unit s</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Pore Size</td><td>-</td><td>0.01 – 0.03 microns to remove suspended solids, bacteria and viruses</td></tr></table>	Item/Parameter/Descriptio n	Unit s	WwTP at Kaval/ Anjanapura	Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses	Ultrafiltration membranes typically have a porosity rangebetween 0.01 and 0.07 microns, with 0.04 microns beingthe most commonly adopted nominal size in the industry.Therefore, we request that a nominal pore size of 0.04microns for the UF membrane be allowed.Kindly confirm.	Refer Addendum-1						
Item/Parameter/Descriptio n	Unit s	WwTP at Kaval/ Anjanapura														
Membrane Pore Size	-	0.01 – 0.03 microns to remove suspended solids, bacteria and viruses														
328	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96 & 8.18.16 UltraFiltration System(Submerged/Pressurized)Part 8-113	Reuse Facilities: <table><tr><th>Item/Parameter/Descriptio n</th><th>Uni ts</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Material (MOC)</td><td>-</td><td>Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.</td></tr></table> &K. PVDF Membrane with BraidedThe membrane fiber features a Braided PVDF membrane formulationcast on polyester support braid.	Item/Parameter/Descriptio n	Uni ts	WwTP at Kaval/ Anjanapura	Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.	PVDF reinforced with polyester is not necessary forsubmerged ultrafiltration systems, which operate at lowerpressures compared to pressurized UF systems.Therefore, we request permission to provide moreadvanced, 100% PVDF monolithic membranes for thesubmerged ultrafiltration system. These membranes offer the following advantages: Greater efficiency compared to braided PVDFmembranes, as the PVDF layer tends to peel offduring operation, reducing functionality. 1. Longer membrane lifespan compared to braidedPVDF. 2. Higher reliability. 3. Reduced chemical consumption compared tobraided PVDF. Kindly confirm.	Refer Addendum-1						
Item/Parameter/Descriptio n	Uni ts	WwTP at Kaval/ Anjanapura														
Membrane Material (MOC)	-	Poly-Vinyl-Dene-Fluoride (PVDF) reinforced with polyester or polypropylene backing layer.														
329	TSPS & WwTPsDesign / SizingCriteriaPart 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Descriptio n</th><th>Unit s</th><th>WwTP at Kaval/ Anjanapura</th></tr><tr><td>Membrane Type</td><td>-</td><td>Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.</td></tr></table>	Item/Parameter/Descriptio n	Unit s	WwTP at Kaval/ Anjanapura	Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.	The tender specifies that the ultrafiltration system should be designed to handle peak plant flow conditions.However, as per the tender, the required UF feed pumpswill pump water to the ultrafiltration system to generate 5MLD of permeate flow for Kaval Site and 17.5 MLD ofpermeate flow for Anjanapura Site.Therefore, we assume that peak plant flow conditions arenot applicable for the design of the ultrafiltration system.Kindly confirm.	Refer Addendum-1						
Item/Parameter/Descriptio n	Unit s	WwTP at Kaval/ Anjanapura														
Membrane Type	-	Submerged (out-to-in) or Pressurized (outside-in or inside-out) hollow fiber membranes, designed to handle peak plant flow conditions.														

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply						
330	TSPS & WwTPs Design / Sizing Criteria Part 5-73 / 5-96	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/Anjanapura</th></tr><tr><td>Maximum Membrane Flux rate</td><td>-</td><td>30 LMH</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura	Maximum Membrane Flux rate	-	30 LMH	The maximum membrane flux specified in the tender, i.e., 30 LMH, is typically applicable for MBR systems that operate under high solids load (>5000 mg/L). For UF systems treating secondary treated wastewater, the solids load is usually below 20 mg/L. In such cases, a lower flux rate is unnecessary and could lead to a significant increase in capital costs without offering substantial benefits to the client. Therefore, we kindly request that the average membrane flux rate be allowed to be ≤ 40 LMH. Kindly confirm..	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura								
Maximum Membrane Flux rate	-	30 LMH								
331	TSPS & WwTPs Design / Sizing Criteria Part 5-74 / 5-97	Reuse Facilities: <table><tr><th>Item/Parameter/Description</th><th>Units</th><th>WwTP at Kaval/Anjanapura</th></tr><tr><td>UF Membrane design load factor (on BOD and TSS)</td><td>-</td><td>2</td></tr></table>	Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura	UF Membrane design load factor (on BOD and TSS)	-	2	Please confirm that the load factor for UF membrane design refers to the design safety concerning the inlet parameters to the UF system. Additionally, since UF membranes are designed to remove suspended solids, we understand that the design safety or load factor of two shall apply only to the inlet TSS values for the UF system. Kindly confirm.	Tender Conditions Prevails.
Item/Parameter/Description	Units	WwTP at Kaval/Anjanapura								
UF Membrane design load factor (on BOD and TSS)	-	2								
332	8.18.16 UltraFiltration System (Submerged/Pressurized) Part 8-109	D. Working Principle of Submerged UF Process: After mechanical pretreatment, the wastewater is fed to the membrane tanks where the water is separated from the solids by the SUF membranes. The liquid is typically fed below the submerged membrane modules.	We assume that the bidder is allowed to provide rotary drum screens as a mechanical pre-treatment for the submerged ultrafiltration process. Kindly confirm.	Tender Conditions Prevails. It is after Disc filtration system only.						
333	8.18.16 UltraFiltration System (Submerged/Pressurized) Part 8-112	I. Single Header Design • The SUF product consists of bundles of hollow fiber membranes spotted only at the lower end of each bundle. The non-potted ends of the fibers (at the top of the bundle) are individually sealed and move freely in the liquid.	The tender specifies that the submerged ultrafiltration system shall have a single header design. However, issues typically associated with double header designs, such as the presence of fibrous material and high MLSS, are not relevant in treated sewage. Double header designs are generally more efficient, providing uniform withdrawal of water from the modules. Therefore, we request approval for the bidder to offer the submerged ultrafiltration header design based on the UF manufacturer's recommendation/design. Kindly confirm.	Refer Addendum-1						
334	8.18.16 UltraFiltration System (Submerged/Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Spare Space for module per train</td><td></td><td>10 %</td></tr></table>	Technical Particular	Parameters		Spare Space for module per train		10 %	We understand that for the submerged UF system, the term “train” shall be interpreted as “cell/tank,” and a 10% spare space for modules shall be provided per “cell/tank.” Kindly confirm.	Refer Addendum-1
Technical Particular	Parameters									
Spare Space for module per train		10 %								
335	8.18.16 UltraFiltration System (Submerged/Pressurized) Part 8-115	<table><tr><th>Technical Particular</th><th colspan="2">Parameters</th></tr><tr><td>Minimum Operating Life of Membrane</td><td>Years</td><td>10</td></tr></table>	Technical Particular	Parameters		Minimum Operating Life of Membrane	Years	10	The minimum operating life of membranes varies depending on several factors, including the type of system and vendor, and typically ranges from 5 years for pressurized ultrafiltration systems to 7 years for submerged ultrafiltration systems. Therefore, we request you to allow the bidder to propose a minimum operating life of membranes as 7 years. Kindly confirm.	Tender Conditions Prevails.
Technical Particular	Parameters									
Minimum Operating Life of Membrane	Years	10								
336	Vol. I, Pg. 9	Hybrid Mode for Bommanahalli Zone in 110 Village Areas (Phase-II) Under Karnataka Water Security and Disaster Resilience Program (KWSDRP)- (Contract Package No. BWSSB CE-P/KWSDRP/WBS-III)	In the name of the work, the Hybrid Mode for Bommanahalli Zone in 110 Village is mentioned. Kindly elaborate the meaning of the Hybrid Mode.	Hybrid Mode Contract - Contract comprising Design Built & Operate (DBO) - Works A and Item Rate works - Works B						
337	Vol. I, Pg. 15	The Tenderer must have generated minimum average annual turnover of Rs. 342.13 Crores in any two financial years calculated as total certified payments received for contracts in progress or completed, within the last 5 financial years.	The average annual turnover set in the pre-qualification for the said tender is very high. As per the CVC Guidelines, the average annual turnover should be 30% of the estimated cost. Accordingly, it is requested to revise the same as per the CVC Guidelines as average annual turnover of Rs. 128.30 Crores (Estimated Cost = Rs. 362.42 Cr + 18% GST = Rs. 427.66 Cr and its 30%).	Tender Conditions prevails						
338	Vol. I, Pg. 16	The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of Underground Sewerage network for the Contract Value not less than Rs. 40.72 Crores in last Five (5) financial years.	Generally, the tenders are being called for the construction of Sewerage Network, STP/WWTP, SPS/WWSPS, rising main etc. in a single project, just like the present tender on the Lumpsum basis. Hence, we presume that the work of the underground sewerage network also includes the cost of construction of sewer network, STP/WWTP, SPS/WWSPS, rising mains, along with its associated work. Please confirm.	Tender Conditions prevails						

Team Leader

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 KWSDRP - BWSSB

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Response to Pre-Bid Queries

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																																																
339	Vol. I, Pg. 16	The Tenderer as sole entity or lead partner and or partner in a joint venture shall provide evidence that it has successfully completed procurement, execution and commissioning of Underground Sewerage network for the Contract Value not less than Rs. 40.72 Crores in last Five (5) financial years.	Alternatively, it is requested to allow the bidder to execute a Collaboration Agreement/MoU with the agency meeting the said qualification criteria.Please Confirm.	Not Acceptable. Tender Conditions Prevails.																																																
340	Vol. I, Pg. 16	Construction Experience- Reuse Plant (with Tertiary Level)..... The Reuse Plant (with Tertiary Treatment) have to meet following criteria for the treated effluent <table><tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2.0</td></tr><tr><td>TDS</td><td>mg/L</td><td>< 1000</td></tr><tr><td>TN</td><td>mg/L</td><td>< 5.0</td></tr><tr><td>BOD</td><td>mg/L</td><td>< 5.0</td></tr><tr><td>COD</td><td>mg/L</td><td>< 30.0</td></tr><tr><td>TP</td><td>mg/L</td><td>< 1.0</td></tr><tr><td>Fecal Coliform</td><td>MPN/100 ml</td><td>Nil</td></tr></table>	Parameter	Unit	Specified Maximum Concentration	Turbidity	NTU	< 2.0	TDS	mg/L	< 1000	TN	mg/L	< 5.0	BOD	mg/L	< 5.0	COD	mg/L	< 30.0	TP	mg/L	< 1.0	Fecal Coliform	MPN/100 ml	Nil	It is to highlight that Tertiary Treatment of the Wastewater / Sewage effluent has not been designed to treat the TDS and hence, the same will not be checked for WWTP/STP. Hence, please delete the requirement of the TDS from the list of parameters.Further, the Total Nitrogen (TN) of the treated effluent will never be reduced up to 5 mg/L and we presume that the same is a typographical mistake. The corrected value must be Total Nitrogen (TN) < 10 mg/L and NH4N < 5 mg/L.Furthermore, if the treated effluent has the BOD and COD contents, then the Fecal Coliform will never be Nil. Hence, need to revise.In view of the above, it is requested to modify the said table as follows: <table><tr><th>Parameter</th><th>Unit</th><th>Specified Maximum Concentration</th></tr><tr><td>Turbidity</td><td>NTU</td><td>< 2.0</td></tr><tr><td>TDS</td><td>mg/L</td><td>Not Applicable</td></tr><tr><td>TN</td><td>mg/L</td><td>< 10.0</td></tr><tr><td>BOD</td><td>mg/L</td><td>< 5.0</td></tr><tr><td>COD</td><td>mg/L</td><td>< 30.0</td></tr><tr><td>TP</td><td>mg/L</td><td>< 1.0</td></tr><tr><td>Fecal Coliform</td><td>MPN/100 ml</td><td>230</td></tr></table>	Parameter	Unit	Specified Maximum Concentration	Turbidity	NTU	< 2.0	TDS	mg/L	Not Applicable	TN	mg/L	< 10.0	BOD	mg/L	< 5.0	COD	mg/L	< 30.0	TP	mg/L	< 1.0	Fecal Coliform	MPN/100 ml	230	Refer Addendum-1
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341	Vol. I, Pg. 17	Construction Experience- Pipeline The bidder must have experience in the role of Prime Contractor (Single entity or JV member)/Management Contractor for procurement and construction of pipeline (DWC/RCC/DI) with a minimum diameter of 200 mm & above in any One year during the last 5 years as on date of bid submission involving minimum length of 27 Km.	To have better competition, it is requested to please allow the bidder to have a collaboration/MOU with the experienced nominated subcontractor/agency in addition to the Joint Venture. Please confirm.	Not Acceptable. Tender Conditions Prevails.																																																
342	Vol. I, Pg. 20	Equipment Capabilities Availability by owning at least 50% of the required specified Key and Critical equipment for the above work. The remaining 50% can be deployed on lease/hire basis for all works provided the relevant documents (Commitment, Agreement etc..) for the availability of the work are furnished.	To have better competition, it is requested to allow the bidder to have a hiring agreement for 100% of the equipment listed in the table. Please confirm.	Not Acceptable. Tender Conditions Prevails.																																																
343	Vol. II Section 7	In table of 1.9 TREATED EFFLUENT QUALITY REQUIREMENTS FOR REUSE – Mentioned that Oil & Grease should be nil	Please Confirm Oil & Grease at the inlet	The design influent parameters requirement shall be as defined Part 5, Volume 2/ Section 7, "TSPS & WwTPs Design / Sizing Criteria". Additionally, The tenderers are requested to make individual site visits for any other additional details and design accordingly.																																																
344	Vol. IISectiton 7	Pumping main to WwTP Works downstream of Line XX shall be included in Works – A, whereas Works upstream of Line XX shall be included in Works – B. For clarity Works in Works – A therefore includes a short length of sewer, which is outside the boundary of the Site for Works – A, as described in the above paragraph.	It is understood that the scope of work A terminates 2 meters from the boundary line, from which point the scope of work B commences. Please Confirm.	The requirement shall be as defined in the tender document.																																																

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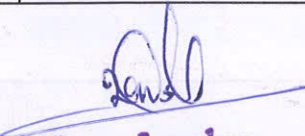
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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply
345	Vol. IISectiton 7	While selecting any type of pump and blower, priority shall be given to higher pump/blower efficiency and lower power consumption and shall ensure that pump/blower can operate at high efficiency throughout its service life. At minimum contractor shall ensure efficiencies of pump/blower as listed below: •Minimum efficiency of Submersible Pumps for ISPS and TSPS shall be 70% •Minimum efficiency of Axial Tubular Pump (MLR) shall be 70% • Minimum efficiency of RAS Pump (Horizontal/Vertical Non-clog solid handling) shall be 65%. • Minimum efficiency of Sludge Pump (Progressive Cavity/Screw pump) shall be 45%. •Minimum efficiency of Rotary Tri-Lobe blower shall be 70% •Minimum efficiency of Centrifugal Turbo blower shall be 90%	Please note that in Pumps & Blowers, efficiency is governed by the duty points themselves. Hence, it is requested to accept the pump & blower efficiency as proposed by the manufacturer in line with the desired duty points.	Refer Addendum-1
346	Vol. II Sectiton 7	Tanker Filling Station For direct filling of these tankers, rising main of the treated water transfer pumps shall be terminated outside the boundary at suitable height and location as directed by Engineer.	Please confirm location & point of termination	Tender Conditions prevails The requirement shall be as mentioned in the tender document.
347	Vol. IISectiton 7	Design of WWTP (Primary, secondary & reuse system)	We understand that the selection of the treatment process (MBBR, EASP, SBR), along with the sizing of process tanks and volume, design parameters (F/M, SRT, MLSS) shall be in accordance with the bidder's design philosophy in compliance with the CPHEEO Manual. Please Confirm	Tender Conditions Prevail.
348	Vol. IISectiton 7	Minimum UF (Reuse Facility) Recovery : 95%	Recovery will depend on membrane selection. Please confirm	Refer Addendum-1
349	Vol. IISectiton 7	Minimum poly dosing rate = 5 kg/T	Minimum Poly dosage rate shall be 1.5-2.0 kg/T as per the CPHEEO manual. Kindly confirm	Tender Conditions Prevails.
350	Vol. IISectiton 7	Primary Clarifier – Plate Settlers with scum collection and removal system. Scraper shall be center-column supported with center drive.	We propose a conventional circular clarifier instead of a plate settler due to its simpler operation, lower maintenance requirements, and better long-term performance.	Tender Conditions Prevail.
351	Vol. IISectiton 7	Packaged RO Plant: 10 m3/h	We understood that 10 m3/hr is RO product capacity and RO design (recovery, membrane selection, flux, etc) as per bidders design. Please confirm.	Packaged RO Plant of capacity is 10 m3/h (Product capacity) and RO design (recovery, membrane selection, flux, etc) shall be as per bidders design.
352	Vol. IISectiton 7	For 10 MLD solar sludge drying system ,in Performance requiremnt ,Input dry solids: 2870 kg/d of dry solids	Dry sludge solids generation (less or more) as per design. Please confirm	Tender Conditions Prevails.
353	IV/P-594	APPROVED VENDOR LIST –FOR MECHANICAL EQUIPMENT Vendor List: Inclusion of Make	The bidder has to operate & maintain the facilities for 10 years; it is requested to let the bidder select the make of equipment, considering its continuous performance for a longer period. This will help in selecting and providing reliable equipment that requires less maintenance during the O&M period.	If Vendor satisfies the tender specification & Vendor Qualification criteria specified in the Tender, tenderer can always submit as a alternate vendor.
354		Buildings constructed under contract	As the O&M period is 10 years, the buildings such as administrative buildings, workshop, etc. constructed under contract will be allowed for use of the contractor during the O&M period without any extra cost. Please confirm.	Not Allowed. Tender Conditions Prevail
355		Site office / Contractors' office provided during execution of contract	As the O&M period is 10 years, we request the site office, contractor's office, staff quarters, temporary sheds, etc. provided during construction will be used by the bidder during the O&M period without demolishing the same. Please confirm.	Not Allowed. Tender Conditions Prevail
356		Date of Submission	Looking to the volume of work involved in tender preparation, we request to extend the date of submission at least by 3-4 weeks after receipt of the reply to Prebid queries	Tender Conditions prevails
357		General and Technical Qualification of Tenderer Required in last 05 years.	We kindly request you to consider General and technical Qualification in last 07 years. As in all other government and semi- government organizations last 07 years is allowed for similar type of major projects	Not Acceptable, Tender Conditions Prevails
358		Biimedia-Virginmedia-Extuded	Agreed	Tender Conditions prevails

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Sr. No.	Vol.No. / Pg. No.	Description	Query	Reply																					
359		Media shape- Cylindrical with internal fins	Agreed	Tender Conditions prevails																					
360		Media Life-(Min) 20 years	Agreed	Tender Conditions prevails																					
361		Solid Loading Rate-Max 45 g/m2	Request to amend for Max 25g/m2	Tender Conditions prevails																					
362		Maximum effective surface Area500m2/m3	Agreed. However request to consider higher surface area like 600-650 also	Tender Conditions prevails																					
363		Tenderer must submit MOU with MBBR technology provider under this contract	Request to abolish the clause for MBBR technology	Tender Conditions prevails																					
364		Total HRT-18Hrs	It should be based on process design.	Tender Conditions prevails																					
365		Technology provider shall provide the evidence that he has successfully supplied the technology for atleast 52MLD-1 nos or 26MLD-2nos with MBBR technology and should be in successful operation for a period of one year as per section 3.1.2(b) (i) Experience in Execution of STPs.	Cooldeck as a leading manufacturer in India and prestigious supplier to major clientlikeTriveni/Ionexchange/Therma x/L&T/RoChem/. We have more than 2000 reference for MBBR media supply to Municipal and other major industry. Presently we do not have reference for the successful operation for a period of one year. Request you to waive off the section 3.1.2 (b) (i) for technology provider to support the Make in India manufacturer.	Not Acceptable. Tender Conditions Prevails.																					
366			Inclusion of Advnced Air Blower Technology We request that Positive Displacement Rotary Helical Hybrid Air Blowers be considered in addition to the currently listed blower types (Twin Lobe/Tri Lobe/Turbo). This technology is highly efficient, sustainable, and particularlu suited to Indian operating environments. It is a proven, 100% make-in-India solution, designed to hadle variable flow and pressure conditions effieciently.	Tender Conditions Prevails.																					
367			Inclusion of free floating IFAS carriers with PU Foam and activated carbon. We propose the use of PU foam-based IFAS carriers impregnated with activated carbon for STP upgrdation. Below are technical specifications: <table><tr><th>Items</th><th>Unit</th><th>Values</th></tr><tr><td>MOC</td><td></td><td>Poly Urethane Fom impregnated with activated carbon.</td></tr><tr><td>Medai Surface Area</td><td>M3/m²</td><td>More than 20000 m² /m³ (BET measurement)</td></tr><tr><td>Media filling ratio</td><td>%</td><td>12-15% of the total volume of IFAS reactor</td></tr><tr><td>Shape</td><td></td><td>Cuboid</td></tr><tr><td>Size</td><td></td><td>20x20x7mm</td></tr><tr><td>Media life</td><td></td><td>Minimum 10years</td></tr></table>	Items	Unit	Values	MOC		Poly Urethane Fom impregnated with activated carbon.	Medai Surface Area	M3/m²	More than 20000 m² /m³ (BET measurement)	Media filling ratio	%	12-15% of the total volume of IFAS reactor	Shape		Cuboid	Size		20x20x7mm	Media life		Minimum 10years	Not Acceptable. Tender Conditions Prevails.
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